

MEDICAL PATHOLOGY, THERAPEUTICS, AND PRACTICAL MEDICINE.

14. *On Typhoid and Typhus Fevers. An Attempt to Determine the Question of their Identity or Non-Identity, by an Analysis of the Symptoms, and of the Appearances found after Death, in Sixty-six Fatal Cases of Continued Fever, observed at the London Fever Hospital, from January, 1847, to February, 1849.* By W. JENNER, M.D., Professor of Pathological Anatomy in University College, London.—This is the title of an extremely interesting paper, which has been published in successive numbers of the *Monthly Journal of Medical Science*, commencing in the number for April of last year, and concluded in the number for April of the present year. It constitutes one of the most important contributions to the history of continued fever that has yet been made, presenting, as it does, the carefully recorded histories of a very large number of cases, admirably arranged and analyzed, by a highly competent and reliable observer. We hasten to lay his results before our readers, and, as the best means of doing so, we shall adopt the author's own recapitulation of the differences in the symptoms and lesions of structure analyzed in his paper.

Age.—Typhoid fever was limited, in the cases here considered, to persons under 40 years of age; nearly one-third of the forty-three cases of typhus were more than 50 years of age.

Mode of Attack.—As a general rule, the attack of typhoid fever commenced more insidiously than that of typhus fever. This observation, like all others in this paper, applies, of course, only to fatal cases.

Duration.—The average duration of the fatal cases of typhoid fever was 22 days. Of the fatal cases of typhus fever, 14 days. Half the cases of typhoid fever survived the 20th day of disease. Not a single case of typhus fever survived the 20th day of disease.

Eruption.—The difference in the appearance of the eruption in the two diseases was as great as it well could be, considering that both were of a reddish hue.

Miliary Vesicles or Sudamina.—These vesicles were present in an equal proportion of the cases of both diseases under 40 years of age. But in no cases of typhus fever, more than 40 years of age, were they detected.

Subsequent experience leads me to believe that miliary vesicles are rarely seen on individuals more than 40 years of age; and very rarely, indeed, if ever, on patients more than 50 years old. I have, during the last year—*i. e.*, since my attention was directed to this point—seen these bodies on no one of the many patients more than 50 years of age, labouring under various diseases, that have come under my observation.

Expression, Manner, Hue of Face, &c.—As the rule, in the cases of typhoid fever here analyzed, the expression was much less indicative of prostration, and more anxious, than in the cases of typhus fever. In the former disease, the complexion was tolerably clear, and the flush, when present, was of brightish pink colour, limited to one or both cheeks, and often distinctly circumscribed. In typhus fever, on the contrary, the complexion was thick and muddy, the flush of the face uniform, and of a dusky red colour.

Headache was a constant symptom in all the cases of typhoid and typhus fevers; but it disappeared by about the 10th or 12th day in the latter, and not till the termination of the second, or middle of the third week, in the former.

Delirium commenced in three only of ten cases of typhoid fever before the 14th day; while it began in fourteen out of fifteen cases of typhus fever before the 14th day. As a rule, the delirium was decidedly more active in typhoid than in typhus fever.

Somnolence.—In eight out of nine cases of typhoid fever, somnolence commenced after the 14th day of disease. In seventeen out of eighteen cases of typhus, before the termination of the second week.

Coma-Vigil.—One-fifth of the cases of typhus fever experienced coma-vigil; not a single case of typhoid fever experienced that condition.

Spasmodic Movements were nearly equally frequent in the two diseases.

"*Retention of Urine, and Involuntary Discharge of Urine and Stools*, occurred with equal frequency in the two diseases; but at a much earlier date in typhus than in typhoid fever.

"*Loss of Muscular Power*.—Little more than a fourth of the patients attacked with typhoid fever kept their bed entirely before the 7th day of disease. All the patients affected with typhus, whose cases are here considered, took altogether to their beds before the 7th day of disease.

"The prostration was rarely so extreme in the cases of typhoid fever as in those of typhus fever. Extreme prostration, when it did occur in typhoid fever, was not observed till from the 14th to the 30th day, while in a large majority of the cases of typhus fever it was marked between the 9th and 12th day of disease.

"*Epistaxis* was present in five of fifteen cases of typhoid fever—in not one of twenty-three cases of typhus fever.

"*Hearing* was equally and similarly affected in the two diseases.

"*Eyes*.—The conjunctivæ were *very much* more constantly and intensely injected in the cases of typhus than in those of typhoid fever; the pupils were absolutely larger than natural in a majority of the cases of the latter disease, while these were abnormally contracted in a large majority of the cases of the former affection.

"*Tongue*.—Although individual cases of the two diseases may have closely resembled each other in the appearance of the tongue, yet, taking the whole of either group of cases, this organ presented a singularly different aspect in the one from what it did in the other. It was much more frequently moist throughout the disease in typhoid than in typhus fever. When dry, it was often red, glazed, and fissured, in the former; rarely so in the latter. Again, in typhoid fever, when the tongue was brown, its hue was much less deep—it was of a yellowish, instead of a blackish, brown. The small, dry tongue, with red tip and edges, smooth, pale brownish-yellow fur, fissured—the surface seen between the fissures being deep red—may be considered differentially as a diagnostic sign of typhoid fever. One only of twenty patients affected with typhoid fever, but eight of forty patients labouring under typhus fever, were unable to protrude the tongue when bidden.*

"*Intestinal Hemorrhage* occurred in one-third of the patients affected with typhoid fever—in none of those suffering from typhus fever.†

"The other abdominal symptoms and signs need no recapitulation.

"*Appetite and Thirst*.—No difference in the two diseases.

"*Pulse*.—The frequency of the pulse fluctuated much more, from day to day, in the cases of typhoid than in those of typhus fever.

"*Cough and Physical Chest Signs*.—Sonorous râle was very much more frequently present in the cases of typhoid than in those of typhus fever—i. e., it was present in eleven out of twelve cases of the former, and in seven only of twenty-one cases of the latter. Dullness of the most depending part of the chest, from intense congesting of the lung, was observed in nine cases of typhus fever—in no case of typhoid fever.

"*Sloughing* appeared to be nearly equally frequent in the two diseases.

"*Erysipelas* occurred in seven of the twenty-three—i. e., in nearly a third of the cases of typhoid fever; in two only of the forty-three cases of typhus fever—i. e., in less than one-twentieth of them.

"*Cadaveric Rigidity* ceased much more quickly in the subjects dead from typhus fever than from typhoid fever.

"*Discoloration of the Walls of the Abdomen, and of the Skin covering the larger Veins*, was much more frequently present in those dead from typhus than typhoid fever.

* This clearly indicates the difference in the amount of prostration in the two diseases.

† I may remark that in one case only of typhus fever, received into the London Fever Hospital during the last three years, has blood passed from the bowels. The case referred to was that of an old man who had hemorrhoids, which occasionally bled when he was in health. During the time specified, notes of near two thousand cases have been taken.

"*Emaciation* had made greater progress in the typhoid than in the typhus subjects.

"*Spots*.—The spots observed during the progress of the cases of typhus fever continued after death; no trace of the spots visible during life could be detected after death from typhoid fever.

"*Head*.—After typhoid fever, the pia mater and arachnoid separated from the convolutions with abnormal facility in one only of nine cases examined with reference to the point. The vessels of the pia mater were abnormally filled with blood in one-third of the cases, but intensely congested in one only of fifteen cases; the cerebral substance was congested in one-seventh of the cases. After typhus fever, the pia mater and arachnoid separated with abnormal facility in nine of eleven cases of which notes on the point were made. The vessels of the pia mater were congested in nearly half, and intensely congested in one-fifth, of the whole of the cases; while the cerebral substance itself was abnormally congested in half.

"*Hæmorrhage into the Cavity of the Arachnoid*, which was not found in a single case of typhoid fever, had occurred before death in one-eighth of the cases of typhus fever.

"The amount of serosity found within the cranial cavity was decidedly greater after typhus than typhoid fever.

"*Pharynx*.—After typhoid fever, this organ was found ulcerated in one-third of the cases. After typhus fever, ulceration of the pharynx was not detected in a single case.

"*Larynx*.—Ulceration of the larynx was found in one of fifteen subjects dead from typhoid fever—in one of twenty-six from typhus fever.

"*Œsophagus*.—After typhoid fever, ulcerated in one of fifteen cases in which it was examined. After typhus fever, the œsophagus was free from ulceration in all the twenty-four cases in which it was examined.

"The epithelium separated from the œsophagus spontaneously at an earlier period after death from the latter than the former disease.

"*Stomach*.—In none of the fifteen cases examined after death from typhoid fever was the mucous membrane of the stomach softened throughout its whole extent; in no case did softening of the cardiac extremity approach perforation. In four of thirty-seven cases of typhus fever, the whole mucous membrane of the stomach was softened; and in four others there was such extreme softening of the whole of the coats of the great *cul-de-sac* that they were perforated by the slightest violence.

"*Small Intestines and Mesenteric Glands*.—The presence or absence of lesion of these organs was the ground on which the cases of typhoid and typhus fever here analyzed were divided from each other—consequently they were invariably diseased in the one and normal in the other.

"*Large Intestines*.—After death from typhoid fever, the mucous membrane of the large intestines was found ulcerated in rather more than a third of twenty cases. In no instance after death from typhus fever.

"*Peritoneum*.—As peritonitis was in typhoid fever secondary to, and dependent on, the entero-mesenteric disease, it may here be excluded from consideration.

"*Spleen*.—This organ was enlarged in all the cases of typhoid fever—softened in one-third of the cases only. Before the age of 50, it was as large after typhus as typhoid fever; after that age, it was decidedly smaller in the former than in the latter affection. After the age of 50, it was as soft in typhus as in typhoid fever; before that age, it was less frequently softened.

"*Gall-Bladder*.—There was ulceration of the lining membrane of the gall-bladder in one of fourteen cases of typhoid fever; in none of thirty-one cases of typhus fever. In the latter disease, the bile was much thicker, and of a darker green colour than in the former.*

* The condition of the bile, as found after death in these two diseases, is worthy of more careful investigation. The difference in appearance is, in a large majority of cases, well marked.

"*Liver, Pancreas, Kidneys.*—These organs were more flabby in the cases of typhus than in those of typhoid fever.

"*Urinary Bladder.*—This viscus was ulcerated in one of the cases of typhoid fever—in none of the cases of typhus fever.

"*Pericardium.*—This cavity contained a small amount of yellowish, transparent serosity in all the cases of typhoid fever examined. The contained serosity was red, from transudation of a solution of hæmotosin, in five of thirty-one cases of typhus fever, in which the pericardium was examined before the termination of the fever.

"*Heart.*—The muscular tissue of this organ was much more frequently and decidedly flabby, and its lining membrane was much more frequently and deeply stained of a dark red colour, in the cases of typhus fever than in those of typhoid fever.

"*Lungs.*—Granular and non-granular lobular consolidation were very frequent in the subjects dead from typhoid fever—rare in those dead from typhus fever. The reverse was the fact with reference to consolidation from congestion of the most depending part of the lung.

"*Pleura.*—Recent lymph or turbid serosity was found in six of fifteen cases of typhoid fever—i. e., between half and one-third, or in the proportion of 40 per cent. The same lesions, but much less in amount, were found in two only of thirty-six cases of typhus fever—i. e., one-sixteenth, or in the proportion of 5.5 per cent.

"The particulars here briefly recapitulated, and still more those fully detailed in the foregoing papers, appear to me to prove indisputably that the symptoms, course, duration, anatomico-pathological lesions, and the tendency to cadaveric changes, are different in typhoid fever to what they are in typhus fever.

"To account for the differences in symptoms which exist in continued fever, with and without entero-mesenteric disease, the two following assertions have been put forward:—

"1st. That typhoid fever is merely typhus fever complicated with lesions of a particular organ; and, therefore, it is to be expected that certain symptoms referable to, and dependent on, that lesion will be present, and so far modify the symptoms of the disease. If the symptoms and signs referable to the intestinal disease as a cause—i. e., the condition of the tongue, the diarrhoea, increased resonance, and fullness of the abdomen, gurgling in the iliac fossa, pain and tenderness in the same region from the fluctuation of the contents of the bowel—were the only symptoms by which typhoid fever was separated from typhus fever, although the idea might cross the mind that they were two diseases, no sufficient ground for their separation would be present, unless the specific cause of the one was proved to be different from that of the other. But, putting aside the symptoms strictly referable to the abdominal lesion, the general symptoms of the two diseases, in the cases here analyzed, differed widely; such differences having no apparent connection with the local affection, but being probably, like it, dependent on some common cause acting on the whole system simultaneously.

"Thus the remarkable differences in the kind, not simply amount,* of the rash in the two diseases; and the tendency to local inflammations, to erysipelas, and to ulceration, observed in the cases of typhoid fever here analyzed, cannot, with any show of reason, be considered to have been dependent on the disease of Peyer's patches—i. e., in the same way as the abdominal signs undoubtedly were; and it is to be carefully borne in mind that the external, the hygienic conditions of either group of cases were precisely the same in all respects. They occupied the same wards, partook of the same diet, slept on the same beds, under the same amount of clothing, and had the same physicians to attend them, and the same nurses to wait on them.

"Moreover, of the symptoms common to the two, the headache continued longer, and the delirium and somnolence came on, as we have seen, much later,

* I have elsewhere shown that the rash and the intestinal disease cannot be considered supplementary of each other. See *Medical Times*, December, 1849, and January, 1850.

in typhoid than in typhus fever; and the delirium, too, possessed a more active character. These differences, also, cannot be explained by the presence of intestinal disease in the former, and its absence in the latter affection.

"The short comparative duration of the cases of typhus fever here considered is another remarkable point of difference, totally inexplicable by the hypothesis that typhoid fever is typhus fever with intestinal ulceration. Had the cases eventually recovered, it might have been said that the intestinal lesion prolonged the disease in the cases of typhoid fever; but that all the fatal cases of fever, with a local lesion of so severe a nature as that recorded to have been present in the cases of typhoid fever, should have had a much longer course than all those other fatal cases of fever in which no organic change of structure could be detected after death, appears to me inexplicable, on the supposition that the former is simply the latter disease, with this serious lesion superadded. Let me repeat, by this hypothesis we are asked to imagine that death is retarded in fever by extensive ulceration of the small intestines, and enlargement, softening, and even suppuration of the mesenteric glands. Surely, it behoves the supporters of such a statement to bring forward cogent proofs of the identity of the specific cause of the two affections ere they ask us to admit its truth.

"The same mode of reasoning appears to me equally conclusive, when we consider the comparatively early period of the disease at which the patients suffering from fever lost the ability to make muscular exertion. For to suppose that the presence of abdominal complication in fever invariably prevented the extremely early supervention of debility is, *a priori*, still more absurd than to suppose such lesions to have retarded death. How, again, are we to explain, if we regard typhoid as typhus with abdominal complication, the differences observed in the ages of the patients, in their general manner; the muddy hue of the skin, and uniform flush of the face, the injected conjunctivæ, and contracted pupils in typhus fever; and the comparatively clear complexion, the pink flush limited to the cheeks, the pale conjunctivæ, and the large pupils, in typhoid fever?

"In what way, also, are we to account for the differences observed in the physical breath signs, on the supposition that the one is merely the other, with abdominal complication?

"Death itself, moreover, adds new proof to the non-identity of the general affection in the two diseases. The comparatively rapid loss of muscular rigidity, the discoloration of the surface, the more flabby condition of the heart, liver and kidneys, the extreme softening of the stomach, and the early separation of the epithelium, after typhus fever, are all cadaveric changes, by which death makes us cognizant of a condition of the system at large, which condition must have existed anterior to the cessation of life from that disease; and which condition could not have been present in the cases of typhoid fever, or death would have made it manifest.

"I need not here more than advert to the difference observed in the lesions which death simply enabled us to lay bare. The almost constantly congested brain and membranes in typhus fever; the frequent presence of the signs of pre-existing serous inflammation in typhoid fever; the difference in the nature of the pulmonary lesions in the two—are inexplicable on the supposition that the one disease is the same as the other, excepting so far as concerns the abdominal affection.

"Thus tried by facts—i. e., by recorded symptoms and lesions—the assertion that typhoid fever is merely typhus fever with abdominal complication, is completely refuted.

"2d. But another mode of explaining the differences which exist between the two diseases has been given—i. e., that the differences observed depend on variations in the epidemic constitution. These cases afford a complete answer to this assertion. For a majority of the cases here analyzed of both diseases were observed during the same epidemic constitution. If the reader will refer to p. 668 of the last volume of this Journal, he will find that nineteen of the cases of typhus fever I have used in these papers were collected between May and November, 1848; and that thirteen of the cases of typhoid fever were collected during the same months of the same year. For such as prefer broad,

general assertions to the details of particular but more limited facts, I may remark, that during three years' attentive watching of nearly all the cases admitted into the London Fever Hospital, in which time there have been epidemics of relapsing fever, typhus fever, and cholera—and, consequently, according to those whose opinions I am here examining, as many changes in epidemic constitution—I have seen no alteration in the general or particular symptoms of either typhus or typhoid fevers, or the lesions observed after death from either—*i. e.*, from November, 1846, to November, 1849. The cases of typhoid fever—which disease is rarely absent for a fortnight from the wards of the hospital—preserved their symptoms unchanged, and presented the same lesions, whatever the epidemic constitution that prevailed; the same is true of typhus fever. Cases of the latter disease are also rarely absent from the wards of the same institution. It is there common to see patients occupying beds side by side, and presenting respectively the well-marked characters of either disease.

“But to return to the particular cases here analyzed. Allowing to epidemic constitution all the power of modifying disease claimed for it by certain writers, it must be granted that whatever influence this epidemic constitution exercised over the group of cases without intestinal lesion, it ought to have exercised over the group of cases with intestinal lesion, because the cases of the two groups were scattered indiscriminately over the space of two years only. If, I repeat, the two affections were really the same disease, then the same epidemic constitution ought to have impressed on both the same general features, implanted in both the same local lesions, and given to both the same tendency to cadaveric changes, and this allowing for all the modifying influence which the accidental presence of the abdominal lesion in the one and its absence from the other group might have occasioned. The analysis of every symptom, and every lesion, shows that the two affections were not thus assimilated by the prevalence of any particular epidemic constitution. But if this epidemic constitution, by any stretch of the imagination, could be supposed to change from week to week, to cause the case attacked to-day to have typhus fever, the individual who takes the disease to-morrow to have typhoid fever, still, it could not account for the fact—as well established as any fact in medicine—that typhoid fever rarely, if ever, affects persons more than fifty years of age; while age exerts little influence in determining the occurrence of typhus fever.

“Thus, then, the assertion that typhoid fever is merely typhus fever modified by the prevailing epidemic constitution is as irreconcilable with facts as that the former disease is simply the latter with abdominal complication.

“To conclude—In the first of these papers, I proposed to examine whether typhoid fever and typhus fever differed from each other in the same way as small-pox and scarlet fever differed from each other; and, for the purpose of comparison, I laid down certain grounds, as those on which we founded our belief in the non-identity of the two last-named diseases. Those grounds were:—

“1st. In the vast majority of cases the general symptoms differ—*i. e.*, of small-pox and scarlet fever.

“[This holds equally true with respect to the general symptoms of typhoid and typhus fevers.]

“2d. The eruptions, the diagnostic characters, *if present*, are never identical—*i. e.*, in small-pox and scarlet.

“[The particulars detailed in the foregoing papers prove that this is as true of the eruptions of typhoid and typhus fever as of those of small-pox and scarlet fever.]

“3d. The anatomical character of small-pox is never seen in scarlet fever.

“[Just in the same way, the anatomical character of typhoid fever—*i. e.*, lesion of Peyer's patches and the mesenteric glands—is never seen in typhus fever.]

“4th. Both—*i. e.*, small-pox and scarlet fever—being contagious diseases, the one by no combination of individual peculiarities, atmospheric variations, epidemic constitutions, or hygienic conditions, can give rise to the other.

“[In these papers, I have not attempted to determine how far this holds true with respect to the diseases here treated: but I have considered it in a paper

read before the Medico-Chirurgical Society of London, December, 1849,* the contents of which I may anticipate so far as to state that, to my mind, the origin of the two diseases from distinct specific causes is as clearly proved as that scarlet fever and small-pox arise from distinct specific causes.]

"5th. The epidemic constitution, favourable to the origin, spread, or peculiarity in form, or severity of either—*i. e.*, small-pox and scarlet fever—has no influence over the other, excepting that which it exerts over disease in general.

"[The facts detailed in these papers prove that this holds as true of typhoid and typhus fevers as of small-pox and scarlet fever.]

"If, then, the above are the grounds—and, after mature deliberation, I am unable to assign no others—for the separation of small-pox from scarlet fever, I think it is indisputably proved that typhoid fever and typhus fever are equally distinct diseases; not mere varieties of each other, but specifically distinct—specific distinction being shown in typhoid and typhus fevers, as in small-pox and scarlet fever, by the difference of their symptoms, course, duration, lesions, and cause.

"Before closing these papers, I ought to observe that, with respect to some secondary points—*e. g.*, the chronological relation between the laryngeal and pharyngeal affections—it may be considered that I have drawn general conclusions from a too limited number of facts. But a few facts, impartially observed, minutely recorded, and carefully analyzed, are, I believe, more likely to give correct results than a multitude of general observations; and moreover, I believe most men would be astonished, if they had in numbers all the cases of any given disease they had ever seen, yet concerning which they have generalized. The method I have adopted, however prolix it may be, however difficult to conform to, however tedious the details into which it leads, has this advantage, that, if the observer be honest and capable of noting what is before him, thinking men may judge of the value of his facts, the force of his reasoning, and the correctness of his conclusion; whereas general observations, while they are totally incapable of proving anything, are exposed to all the fallacies of definite statements, because the one, like the other, rests ultimately on the accuracy of the facts observed. If the observations, on which any reasoning is founded, be erroneous, no cloak of those observations, in general terms, can render the conclusions correct. It has been objected to definite numerical statements, that they mislead the reader by an *appearance* of accuracy, in cases where there has been great inaccuracy in observation. This objection appears to me to lie against the condition of the reader's mind, and not against the method. For if the reader fails to examine, 1st, the trustworthiness of the author, and 2dly, the legitimacy of his conclusions, the fault is, obviously, mentally his own, and in no way to be ascribed to the method. Because chemists have, by the imperfection of their analyses, arrived at incorrect conclusions as the ultimate constitution of various organic bodies, we surely would not have them henceforth confine themselves to the general impressions produced on their minds by a series of experiments or observations. The more complicated the problem to be solved, the more careful ought we to be that *every* step in its solution is made correctly. How complex questions, such as arise in medicine, are to be determined mentally—*i. e.*, without the aid of figures—by ordinary men, I am at a loss to conceive. Yet physicians think to solve, by mental reveries, problems in comparison with which the most difficult that the most renowned mental calculators ever answered were child's play: and not only do they think to solve these problems, but to carry in their minds for years the complicated materials by which they are to be solved.

"Who can tell what general statements are worth, without knowing on what evidence they rest? One man's many is another's few. Last month (Oct.), I saw thirty cases of fever—to me these were few; to men with smaller opportunities of observing that disease, they would have been many. One man's frequent is another's seldom."

[* An abstract of this paper is given in the preceding No. of this Journal, p. 384.]

15. *On the Treatment of Ague by a Single Dose of Quinine.*—Dr. C. PFEUFER states he has had many opportunities of treating this disease, and was formerly in the habit of prescribing from fifteen to twenty grains, in divided doses, in the intervals of the paroxysms. Latterly, he has given five-grain doses, until from forty to sixty grains were taken, and with great success. The number of patients having greatly increased, during the privations consequent upon the revolutionary disturbances, the expense of so much quinine was found a serious consideration; and he determined to try whether, by a different mode of administration, less might not suffice; and, certainly, if the results he has arrived at are confirmed by others, he will have conferred no ordinary boon upon the distributors of charitable medical relief. He finds, indeed, not only that the expense may be vastly diminished, but the cure expedited and rendered more certain, by administering a *single ten-grain dose* (made into four pills, with ext. of *millefolium*), on a day free of fever. This dose is well borne, none of the inconveniences which result from the long-continued use of small doses, or the tinnitus, giddiness, &c., produced by very large ones, presenting themselves. The subsequent attack is weaker, and its successors still more so, the convalescent remaining in the hospital from four to eight days. A tabular view of the particulars of thirty-four cases so treated is given.—*British and Foreign Medico-Chirurgical Review*, April, 1850, from *Hentle and Pfeuffer's Zeitschrift*, B. viii.

16. *Treatment of Phthisis.*—Dr. JAMES TRUMBULL, Physician to the Liverpool Infirmary, in a highly interesting paper in the *London Journal of Medicine* (Feb., 1850), makes the following observations relative to the means which have been thought to have some power in promoting the absorption of tubercle, and especially respecting the efficiency of cod-liver oil.

"Whatever," he says "may be the condition of the blood and of the capillary vessels, which determines the exudation or secretion of tubercular matter, there cannot be any doubt that debilitating causes, such as innutritious food, deficient exercise, and impure air, have a powerful influence in producing this disease. The researches which have been made in the present day in chemistry and physiology have tended more and more to prove the connection between deranged assimilation and many diseases; and in struma, Dr. Prout has observed that all the assimilating processes are not fault, but chiefly those which take place between the duodenum and the circulating system, and by which the chyle is converted into blood. It is also well worthy of notice, that tubercles may be produced in some of the lower animals by confining them in damp places, and feeding them on unwholesome food. This was done with rabbits by Drs. Baron and Jenner,* and by Dr. Carswell; and it is a fact of some importance, as well in reference to the curability of tubercular diseases by absorption as in showing the power of good alimentation, that the tubercular disease has been removed by feeding them afterwards on more nutritious food. In some kinds of insects, too, it has been found that a tubercular deposit may be produced by feeding them on bad food, and repeatedly plunging them in cold water. The same influences operate on man; for Dr. Baly† has shown that mental depression and confinement cause a remarkable increase in the mortality among the inmates of prisons, and that this is chiefly produced by consumption and scrofula. Such facts show us the importance of hygienic means of treatment; and, viewed in connection with the power of cod-liver oil in promoting the assimilation of the food, they prove to us forcibly the necessity of bringing the digestive organs into as healthy a state as possible, in order to effect the most perfect assimilation of light nutritious articles of diet.

"We have already shown that inflammation and tubercular deposition are allied processes; and the effect of local irritation, in producing pulmonary consumption, is exemplified in the frequency of the disease in persons whose occupations cause them to inhale silicious or metallic particles; and I have no doubt that the fact, noticed by Phillips, of consumption being most prevalent in towns, and scrofula less so, while the reverse occurs in the country, arises,

* BARON on Tubercular Diseases.

† *Medico-Chirurg. Trans.* vol. xxviii, 1845.

not as he supposes, from any difference between these diseases, but, in a great measure, from the inhalation of particles of dust and smoke determining the deposition of tubercular matter in the lungs instead of the external parts. In all our efforts to enuse the absorption of tubercles, it must, therefore, be a matter of primary importance to prevent irritation, and to remove inflammation or congestion of the lungs by the usual means—local depletion and counter-irritation more especially. The action of all the depurating organs which purify the blood by removing from it the products of the worn-out tissues, should be promoted by the appropriate means; and, with the view of preventing entarrhal irritation at the earliest period, I believe that there is no means so effectual as washing the whole surface with tepid or cold salt and water, followed by friction, which excites the depurating function of the skin, fortifies it against the impression of cold, and acts as a general tonic.

"The condition of the blood, as ascertained by Andral, and subsequently by Beequerel and Rodier, furnishes another important indication in the treatment of phthisis, and one which has been found practically useful. In the earliest stage, and perhaps in some cases also before the formation of tubercles, the proportion of globules is below the healthy standard: as the disease progresses, the quantity falls; and in one case, Andral found the proportion as low as 72 parts in 1000 of blood. In this respect, consumption bears a resemblance to chlorosis, and in the diminution of the red globules, we have, in the one disease as well as the other, an indication for the employment of chalybeate tonics. I may here observe that, though we have this diminution of the red globules, we are seldom able to discover a loud continuous murmur in the veins of the neck, which is so common a sign in chlorosis. This difference I account for, from there being in chlorosis not simply a diminution of the red globules, but also an increase of the aqueous part of the blood. The veins are thus kept in a state of tension, which is favourable to the production of the venous murmur. In consumption, on the other hand, especially when the disease is in an active state, there is a diminution not merely of the globules, but of the whole quantity of blood in the system, which, with the relaxed state of the tissues arising from loss of flesh, prevent the degree of venous tension necessary for the full development of this murmur. When, however, the tubercular disease has become quiescent or has receded, I have sometimes observed the occurrence of a continuous murmur in cases where it had at first been absent; and this I have considered a favourable sign.

"In the preceding part of the paper, we have endeavoured to show that there are three ways in which recovery from consumption may take place: first, by the shrivelling of miliary tubercles; secondly, by the transformation of crude yellow tubercles into cretaceous or calcareous concretions; thirdly, by the healing of cavities. We have now, fourthly, to show that the results of treatment seem to prove that tubercles may be removed by absorption. We cannot, however, have ocular proof of this, and hence there has been doubt as to the possibility of the removal of tubercles in this way; but the facts I have still to adduce will tend still further to remove any doubt on this point.

"The remedies which, I think, have most claim to our attention as agents capable of promoting changes in tubercular matter, are *mercury*, *iodine*, the *alkalies*, and *cod-liver oil*.

"As *mercury* is unquestionably the most powerful remedy we possess for promoting absorption of the serous and fibrinous exudations of acute inflammation, we would naturally expect that it should have some power in causing absorption of tuberculous deposits; but it would seem that in proportion as they recede from and lose the characters of plastic organizable fibrin, they are less under the sorbefacient influence of this remedy: and in ordinary cases of consumption, not distinctly produced by acute inflammation, mercury, though occasionally useful as an alternative, to promote the biliary and other secretions, is injurious when given so as to act upon the constitution—producing a debilitating effect, and hastening the softening of tubercles. In cases of chronic pneumonia, which hold an intermediate place between pneumonia and phthisis, I have employed the remedy in the latter way; and, if we had reason to believe that miliary tubercles existed in an early stage, I think we might be jus-

tified in using this remedy, with the view of promoting the mode of transformation described by Rokitsansky. The local application of mercury is a powerful means of causing the absorption of indurated swellings, as, for example, of the joints; and, as we are now able in many cases to arrest the constitutional disease in consumption, it becomes us to use every means likely to assist in the removal of the local disease also; and none appears likely to be of more service than mercurial inunction. Dr. C. J. B. Williams says that he has successfully treated several cases, in which the signs and symptoms left him in no doubt as to the existence of tuberculous peritonitis, by ointment of iodide of mercury to the abdomen, together with iodide of potassium internally.

"The preparations of iodine have some resemblance to mercury in their effects, but, unlike this remedy, they are not of any service in acute disease, but are more useful in causing the absorption of tubercular deposits, especially in glandular structures. The syrup of the iodide of iron is the preparation I have most frequently used, as it combines the absorbent properties of iodine with the tonic power of iron, and thus fulfils the indication in reference to the diminution of the globules of the blood. I regard it as one of the best tonics we can use in the early stage of the disease, and I think that I have seen the early symptoms of phthisis arrested by it in a few cases. It was, during last summer, the chief means of restoring to health a young gentleman, who, in addition to cough, and loss of flesh and strength, presented the signs of incipient tubercular deposit at the summit of the left lung—very slight dulness, with some sibilant rhonchi. I prescribed it with very good effect in the case of a lady about thirty years of age, who came from some distance in the country to consult me, in July, 1847. She had become thin and very liable to colds, and had some mucous expectoration. She had also had an attack of spitting of blood three years previous. Some consolidation at the upper part of the right lung was indicated by slight but distinct dulness on percussion close to the sternum, and increased loudness of the cough and voice in the same spot; but there were no mucous or other rhonchi. She wished to remove to the South of England; but as the disease did not seem in an active state, I recommended hygienic means of treatment, to improve the general health. I also ordered syrup of the iodide of iron, with tincture of hyoscyamus in infusion of calumba, and inunction of iodide of lead ointment below the right clavicle. When I again saw her, five or six weeks after, I found her improved in health; and the signs of consolidation appeared, both to her ordinary medical man and myself, to have diminished considerably. She has since then enjoyed pretty good health, and has had two children, but during last pregnancy there was some return of hæmoptysis. After this she took cod-liver oil for a considerable time, with benefit. The iodide of lead ointment I have used in other cases besides this, with the view of causing absorption of tubercular deposits in the lungs, on the same principle on which we use it in scrofulous glandular swellings. I think it better suited to produce such an effect than the application of a concentrated tincture of iodine, which is a powerful counter-irritant, and as such has been found 'remarkably beneficial' at the Hospital for Consumption.

"Before the introduction of iodine, the *alkalis* were regarded as remedies of considerable absorbent power. *Liquor potassæ* is a powerful alterative medicine, and it has sometimes been found to cause absorption of an enlarged gland even after iodine has failed. Dr. Campbell recommended it very strongly in phthisis; and Sir J. Clark has observed that the alkalis increase the urinary, and appear to promote the bilious secretion, and to render that of the mucous membranes more fluid: in whatever way they operate, they are certainly beneficial in many tuberculous affections.* Their power of promoting absorption of lymph and other exudation products of inflammation of the lungs or pleura, especially when combined with iodine, is a fact of acknowledged practical value. Dr. Golding Bird† has communicated some most interesting and useful information as to the action of alkaline remedies; he calls them depurating or chemical diuretics, and has shown that, unlike most diuretics, they increase not only the fluid, but also the solid parts of the urine. This they do by a chemical ac-

* Treatise on Pulmonary Consumption.

† Lectures on the Influence of Researches in Organic Chemistry on Therapeutics.

tion on the exhausted and worn-out tissues; and he thinks that parts of low vitality, such as tubercle, will be most readily acted on by these chemical agents. It is also worthy of notice, that the caustic alkalis are the most powerful solvents of tubercle; and it is therefore reasonable to suppose that they will retain a portion of that power, when circulating with the blood in the capillaries.

"*Cod-liver oil* has been known as a remedy for consumption and serofula in Germany and the north of Europe for a considerable period, and Dr. Hughes Bennett* has the merit of having brought it into notice in this country. Of the three kinds of oil, the pale, the light brown, and the brown, it has been thought in Germany that the darkest coloured is the most useful; and this opinion was supported by Dr. Bennett, and is still maintained by Dr. De Jongh. It seems, however, to be now sufficiently well ascertained that the brown has no superiority over the pale oil. I have seen the best effects speedily produced by the purest specimens of pale oil. Dr. Williams used the pale oil prepared according to Donovan's method: and in the report of the Hospital for Consumption, it is stated that 'different qualities of oil have been tried without exhibiting any marked difference in the remedial effects; but the offensiveness of some of the darker kinds renders their general use impracticable.'

"The power of this remedy in controlling the progress of phthisis in a large proportion of cases, and even of arresting its progress in not a few, has now been completely established; and the Hospital for Consumption has even furnished us with statistical facts as to the results of treatment in each stage of the disease.

"In Dr. Bennett's work, we are furnished with three cases, fully detailed, of decided consumption, where recovery took place under the use of this remedy. In the appendix to the last edition, he says: 'I have succeeded, in several cases, in ascertaining that the caverns have completely healed up, every symptom and physical sign indicating their presence has disappeared, and there has remained only slight dulness on percussion, and increased vocal resonance, as a proof of the puckering and induration of the pulmonary parenchyma attendant on the cicatrix.' In proof of this statement, he relates two other cases. The most favourable account that has yet been given of the efficacy of cod-liver oil is that published in this Journal, by Dr. C. J. B. Williams, who states that of 234 cases of which he kept a record, there were no fewer than 206 in which its use was followed by marked and unequivocal improvement. The most numerous examples of decided and lasting improvement occurred in those cases in the second stage, where the tubercular matter was beginning to soften. He has given a full account of eleven cases in the third stage, the results of which may be stated as follows: In one case, a cavity seemed to have healed completely; in five, all the symptoms were removed and recovery took place, but dry cavities remained in the lungs; in one, it seemed probable that the restoration was even more complete; in one case, that of a child, recovery took place, but the existence of phthisis was somewhat doubtful; in one, the advance of the disease was stayed; in one, the patient recovered so far as to marry, but relapsed; and in one, after temporary recovery, the patient died.

"From the report of the Hospital for Consumption, it appears, that this remedy has been productive of more good in the treatment of phthisis than any agent yet employed; and the results furnished by a table of 542 cases in which it was given, are highly interesting. The collective results in all the stages show, that in 63 per cent. the symptoms improved; in 18 per cent. the disease was arrested; and in 19 per cent. only it went on unchecked. The report observes that when it is recollected that of the whole number treated at the Hospital, the disease was arrested in only 5 per cent., the value of this remedy, under which the disease was arrested in 18 per cent., must be considered very great. Dr. Williams speaks most favourably of the oil in the second and third stages, observing that, though not less satisfactory in the first than in these, it is slower in its action. This report, however, establishes the fact which we might naturally expect—that the greatest number of cases are arrested in the first stage. In nearly 18 per cent. of the males, and in 28 of the females, in the first stage,

* Treatise on the *Oleum Jecoris Asellii*. 1841.

the disease was arrested; that is, in 293 cases of both sexes, it was arrested in 23 per cent. It was arrested in 14 per cent. of the cases of both sexes in the second and third stages.

"What I have seen in my own practice fully confirms these statements; and in two of the cases which follow, ii. and iii. the symptoms and physical signs showed as hopeless a condition as in any cases of consumption I have ever seen, and indicated a speedily fatal termination, which, I am persuaded, nothing that we are yet acquainted with, except this remedy, could have averted.

"Cod-liver oil has been called a tonic remedy, which it undoubtedly is; but it differs from other tonics, and indeed from most other remedies we are in the habit of giving in this disease, in one important respect—that we may use it with advantage in every stage, and that there is scarcely any symptom which contra-indicates its employment. In general, the appetite speedily improves, the cough abates, the hectic fever diminishes, and the perspirations are arrested. The patient at the same time improves in colour, and gains strength and flesh. There are very few cases in which the pale oil cannot be taken; and if we begin with a tea or dessertspoonful, and gradually increase it to an ounce thrice a-day, on the surface of peppermint, water, or milk, there are few persons who do not take it with facility, and become reconciled to it. When it causes nausea, naphtha or hydrocyanic acid will usually remove this symptom. We must not, however, trust exclusively to this remedy, but must give due attention to those general indications for treatment which have been pointed out. We should also remove any urgent symptoms, such as cough, by a sedative; and morphia is one of the best, given either in simple oxymel, or oxymel scillæ, where an expectorant is required. Local inflammatory action must also be removed by the usual means. Unless we are thus careful in removing prominent symptoms, and in bringing the digestive organs into a healthy state, so that the oil may be assimilated, we may fail in deriving from the remedy the benefit which it is capable of procuring under judicious management."

17. *Cicatrices in the Lungs*.—DR. W. T. GAIRDNER produced at the meeting of the Medico-Chirurgical Society of Edinburgh, March 20th, 1850, a number of specimens and drawings, illustrative of the effects of tubercular softening, ulceration, pulmonary apoplexy, and gangrene in the lungs. When cure followed any of these lesions, the appearances found after death were so nearly identical, that, from simple inspection of the parts, it was often impossible to draw any just conclusion as to the nature of the disease under which the subject had originally laboured. Dr W. G. expressed his belief that some specimens, generally regarded as illustrative of bronchial dilatation, were, in fact, examples of cavities resulting from gangrene or ulceration of the lungs.

Dr. Bennett fully agreed with Dr. Gairdner that in the lungs, as elsewhere, problematical appearances were often found. To solve the doubt in such cases, it was necessary to associate the history of the symptoms during life with the lesions observed on dissection. Cretaceous concretions were not exclusively observed in the lung after the removal of tubercle; any deposit might become loaded with salts, and dry up. The position of such concretions often afforded some clue to their probable origin. There were, however, intermediate cases, in which the precise nature of the lesion could not be made out, even with the assistance of the microscope.—*Monthly Journal Med. Science*, May, 1850.

18. *Clinical Remarks on Gangrene of the Lungs*. By WILLIAM STOKES, M.D. (*Dublin Quarterly Journal*, February, 1850.)—In this interesting paper on one of the most terrible and unmanageable of the diseases of the lungs, the author presents the following conclusions as justifiable in the present state of our knowledge of the subject.

- "1. That gangrene of the lung is met with under a variety of forms, differing from one another not only in the duration and violence of the symptoms, but also in their relations to various local and constitutional diseases.
2. That in a great proportion of the cases, the disease is attended with putrefactive action engaging the necrosed portion of the lung, and affecting its

3. That, in the progress of a case, we may observe the septic action singularly variable. It is increased by over-stimulation of the system.

4. That we cannot explain the symptoms in many cases of this disease, without assuming, either that a spot of mortification, so small as to be undiscoverable by physical means, causes severe symptoms, and is attended with super-secretion; or that a process of putrefactive secretion precedes, in many cases, the death of the lung.

5. That pain of the most extreme kind may attend this disease; and, in the remittent form, appear on each access of the affection with unmitigated violence.

6. That the contact with air is not necessary for the formation of a gangrenous eschar or cavity.

7. That hemoptysis commonly attends each access of the remittent disease.

8. That, in the earlier periods of this disease, auscultation and percussion often fail in detecting any signs of organic change: or, if such is discovered, it appears incommensurate with the gravity of the symptoms.

9. That, in many cases, the evidences of congestion and parenchymatous infiltration seem to follow rather than precede the symptoms of gangrene.

10. That dextrocardia, from diminished volume of the lung, may occur in gangrene of the right lung.

11. That gangrene may attack a lung previously hepatized from ordinary inflammation, or in a chronic tubercular condition.

12. That from the pre-existence of signs and symptoms of the stages of pneumonia, or from the early appearance of signs of excavation, we may be able to distinguish between fetid abscess of the lung and gangrene.

13. That, in certain cases of chronic bronchitis, the breath and expectoration may become fetid, and yet no gangrene appear to have formed.

14. That the diseases with which gangrene may be found complicated are divisible into general and local affections; but that its occurrence in the class of general diseases, termed putrid or asthenic, is much more rare than might be expected.

15. That it is rarely observed in the typhus fever of this country, even where the secondary bronchial affection is intense; but that in typhoid pneumonia it may be occasionally observed.

16. That it may complicate a previously existing disease of the lung, such as pulmonary tubercle, or an unresolved hepatization.

17. That it may be directly induced by the pressure of a tumour on the nutrient vessels and nerves of the lung, so that, in cases of cancerous or aneurismal tumour, the patient may die, not from the extension of the original disease, but from its inducing a rapid mortification of some portion of the lung.

18. That the disease, though always of a formidable character, is not necessarily fatal."

19. *Case of Communication between the Rectum, Bladder and left Ovary; Calculus in the left Kidney; great Enlargement of the Liver, with lateral Curvature of the Spine.* By T. P. HESLOR, M. D.—Catherino Everall, aged 37, married, was admitted into the General Hospital, Birmingham, on the 22d of June, 1849, under the care of Dr. Johnstone, an extremely emaciated woman, with a countenance indicative of intense suffering. She had been a patient twelve months previously in the hospital, and found so much relief that she insisted upon being brought again, though it was obviously only to die. At the former period she complained of extreme pain in the left lumbar region, and passed a large quantity of purulent urine. This latter symptom appears to have existed for several months previously. About the time of her last admission the menses disappeared, and never since recurred. Many years before, two stones were extracted from the bladder at the Shrewsbury Hospital, of which I have been unable to learn more than that they were smooth, round, and of great beauty, inasmuch that they were kept for a long time as interesting curiosities by the friends of the patient. When in the hospital, she appeared to labour under such marked symptoms referable to the bladder that Dr. John-

stone directed it to be sounded, but no calculus was detected. Up to the period of her present application to the hospital, she has had great difficulty in passing urine, and endured severe pain until she succeeded. Her husband informed me that she averred she had passed air from the bladder for at least twelve months, and that it was her opinion that the air prevented the evacuation of its contents, and this expulsion of air always produced marked relief. She appears to have had the belief that the urinary and faecal passages communicated, and was never able to conceive for the curious odour and appearance of the discharges from the urethra. She told her husband that her spine began to yield at the age of 14, which she attributed to over-exertion in carrying her younger brothers and sisters. She never had children, and has never had an attack of jaundice.

She suffered such extreme exhaustion from her journey (a distance of fourteen miles), that it was found impossible to make a very accurate examination of her condition. She was ordered good diet, wine and quina with sulphuric acid. On the evening of the 25th she had an exacerbation of pain; the countenance assumed the hippocratic character; while the strength was evidently failing fast. The pain was exclusively confined to the left posterior lumbar region, and coursed down the left ilium to the hypogastric region. These portions of the abdomen were exquisitely tender to the touch. There was a clear sound on percussion over the last-named regions, but the lumbar region was perfectly dull; here there was distinct evidence of fulness also, but somewhat undefined. The right half of the abdomen was tense and absolutely dull on percussion, extending from the ribs nearly to the crest of the ileum. The limits of this, the hepatic tumour, were easily definable both by touch and percussion. The wine was increased, but she sank during the night. She passed purulent urine up to the time of her death.

Autopsy.—Head not examined.

Thorax.—Nothing worthy of note was observable in the lungs and heart. The right pleural cavity was diminished to a remarkable degree by curvature of the spine, commencing at the dorsal vertebrae, its greatest convexity ending at the base of the thorax. The lumbar portion of the spine presented curvature, to a less degree, to the other side.

Abdomen.—On opening the abdomen, the liver was seen to occupy its entire right half, sweeping below the umbilicus to the right posterior lumbar region; its posterior border deeply notched by the spine; its inferior surface strongly marked by the kidney and colon. Its consistence was much firmer than natural; it felt almost dry, and cut like brawn, its general aspect being that of a waxy liver, with solid fat deposit. The left kidney was fully one-half larger than its natural size. On being carefully cut open, small abscesses were found throughout its substance; and several cunee of pus came from the immensely dilated pelvis. The infundibula were loaded with calculi, accurately moulded to their form; some of these reached the calyces. The head of the ureter partook of the dilatation of the other renal passages, and was occupied by a calculus as large as a walnut, so closely impacted that it was only after some manipulation a probe was made to pass into the pelvis of the organ. The ureter below this point was not dilated to a marked degree. On proceeding to examine the pelvic organs, a tumour about the size of an ordinary orange was seen occupying the position of the left ovary. The adhesions between this body, the rectum and bladder, were so intimate that all these organs were taken out together and carefully dissected. Upon opening the bladder, which was of moderate dimensions, considering the age and sex, a minute hole was noticed in the left angle of its superior fundus. The mucous membrane around was minutely granular and stained of a dark slate color; a probe was found to pass with the greatest facility from this point into the head of the rectum, which strongly adhered to the upper back part of the bladder. The tumour mentioned was found to be the left ovary enlarged; externally, its color was bright brown, its consistence obviously less than small ovarian tumours in general. A soft, pulsatious, half-faecal, half-caseous-looking matter was contained within it, which was found to communicate with the rectum, or, more correctly,

with the lower anterior portion of the sigmoid flexure of the colon, adherent to the tumour. This communication was evidently out of the direct course of the intestinal contents, from the presence of bands and folds in the cavity of the gut, both below and above the opening of communication. The finger *could* be passed along the bowel without passing into the abnormal communication and *vice versa*. The recto-ovarian did not correspond exactly with the recto-vesical opening, the latter being a little lower in the pelvis, but all were matted together. The remaining abdominal and pelvic viscera were healthy.

The morbid appearances found in the pelvis in this case are, as far as I know, unique. It is difficult to understand how this poor woman sustained life so long with such an amount of disease going on in the abdomen. Nor is it by any means easy to give a decided opinion as to the nature of the ovarian tumour. There was no evidence of tubercle or cancer, the two most common causes of abnormal communication between the various organs of the body. Perhaps the only explanation that can be offered is, that a slow process of inflammation had been for a long time silently throwing out its characteristic exudations, and gradually glueing together those organs lying nearest to the great permanent lesion of the left kidney, by a *selection* too obvious to require further mention; upon the adhesion followed the ulcerative process, and so ensued the remarkable appearances discovered after death. It is impossible to imagine that the communication between the ovary and rectum could have existed long; for although, from the peculiar anatomical character of the former, the cavities of these organs did not communicate *freely*, and the existence of a great pus-discharge from a neighboring organ might have tended to check it, irritation must have been produced in no long time after the connection, sufficient to cause ovarian suppuration, with pelvic abscess.

It will be observed that the account of the woman passing air, if not feces, from the bladder, was obtained after her death from her husband. We must take such observations with caution, although these inquiries were made with scrupulous care; and in further proof of the correctness of his answers, I may add that the poor woman had frequently attempted to describe her sensations and notions to her medical attendants, who treated them with incredulity.—*Dublin Quarterly Journal*, Feb., 1850.

20. *Granular Corpuscles in the Encephalon and Spinal Cord of Hemiplegic Patients.*—Dr. LUDWIG TÜRK has described the microscopic appearances presented by the brain and spinal cord of three hemiplegic patients. His observations tend to show the necessity of employing other means than the unaided eye, in the investigation of parts supposed to be the seat of disease. We not unfrequently hear of *post-mortem* examinations, especially of the nervous centres, in which no morbid appearances have been detected either by the eye or by feel. The state of the brain or spinal cord is also often vaguely described as being "somewhat hardened," "of rather firmer consistence than usual;" and nothing more is said about the subject. Now we have no doubt, that if a microscopic examination were made in such cases, we should often find unequivocal proofs of disease. The first and second of the cases related by Dr. Türk entirely prove the correctness of this assertion. In them, the spinal cord was apparently healthy, and of proper consistence; but when examined with the microscope, was found to be the seat of disease.

CASE I.—The first case was that of a woman aged 73, who had had paralysis of the left side for six months. There was an apoplectic cyst on the outer side of the right corpus striatum and optic thalamus, with white softening of the latter; and numerous granular corpuscles (*körnerkörperchen*) were met with as deep as the *crus cerebri*. The spinal cord appeared healthy to the naked eye; but on dividing it into its lateral halves, it was found, under the microscope, to contain a large number of similar bodies. The left lateral half contained a large number, while they were much fewer on the right side. Dr. Türk then made fine vertical sections from without inwards; and found that the most superficial sections on the left side showed the granular corpuscles in great number, while in a similar situation on the right side they were entirely absent, and only began to appear singly towards the middle line. From this:

examination, the interesting result was brought out that the disease in the cord was limited to the same side as that on which the paralysis had existed—the opposite side to that on which the brain was diseased.

CASE II.—The second case, was that of a man, forty years of age, who had laboured under paralysis of the right side for half a year. There was an apoplectic cyst in a similar situation to that mentioned in the first case; the right thalamus had undergone white softening as deep as the crus cerebri, and presented an abundance of granular corpuscles. The pons Varolii, which was not examined in the first case, also contained them; the medulla oblongata presented them in abundance on the right side, but more sparingly on the left; and on the left side of the spinal cord they were very abundant, while they were wanting on the right. From the pons downwards, all the parts were of normal consistence, and appeared to the naked eye to be healthy, both entire and in section.

REMARKS.—Two explanations may be given of the origin of these bodies. They either arose from an extension of the disease from the crus cerebri downwards, or they were the effect of the hemiplegia produced by disease of the brain, which induces a process of exudation in one-half of the spinal cord. As to the first of these suppositions, it is difficult to understand why the extension of the disease should be confined to one side, and especially why it should not have extended to the opposite side at the point of decussation. With regard to the second explanation, it is to be observed, that in both cases there was a high degree of paralysis of motion, while sensation was but little affected: and hence, if this explanation be adopted, the exudation process would have to be considered as having a connection with paralysis of the motor elements.

In several other cases of hemiplegia, from cerebral diseases, the spinal chord has been found healthy.

CASE III.—The third case is one of a woman, forty years old, who had had hemiplegia of the left side for a year and three-quarters. The upper extremity was perfectly paralysed; the lower one less so; sensibility appeared normal. There was an old apoplectic cyst in the right corpus striatum and optic thalamus. Numerous granular corpuscles were observed, which rapidly decreased in proceeding downwards; so that the right crus cerebri, the pons Varolii, the medulla oblongata, and the upper sections of the left half of the cervical portion of the chord, only presented them singly. They were much more numerous from the origin of the third to that of the seventh cervical nerves. From this point downwards, they again decreased, but at the lower part of the dorsal portion again began to increase, until they reached their maximum at the origin of the lumbar nerves. From this point they again diminished, and at the origin of the lower sacral nerves they entirely disappeared. The nerves on the diseased side were found perfectly free from the corpuscles, even a few lines from their origin. The right half of the spinal cord presented them only in the middle line, the medulla oblongata only a very few: the left half of the pons, as well as the left crus cerebri, contained none.

The fact that in this case the disease was not equally extended, the parts between the shoulder and hip joints as well as that between the brachial plexus and the encephalic cyst, showing very few of the corpuscles, tends to point out that the disease of the spinal cord cannot be considered as an extension of that which existed in the brain.—*London Journal of Medicine*, April, 1850, from *Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, January, 1850.

21. *Cryptogamic Vegetations in the interior of the Hair in Favus*.—DR. C. WENL has published an account of his having discovered cryptogamic vegetations in the interior of the hair in favus. After briefly referring to the observations of Gruby, Günsburg, Malmsten, and Lebert, he says:—

I directed my attention to the interior of the hair, making use of a concentrated alkaline solution to render it more transparent. This solution acts on some parts of the hair in a very remarkable manner; in different strata of it, there appear small elongated gas-bubbles, with a sharp dark outline, giving the appearance of an interrupted canal; sometimes also larger gas-bubbles are

seen lying at the outside of the hair. The latter gradually becomes more transparent; and, in the situation of the dark broken canals, there appear filaments formed of elongated quadrangular or roundish molecules; these extend through a certain portion of the hair, here and there giving off branches, and are to be found in all layers of the hair. These filaments consist of granules arranged like beads. Their transverse diameter varies; their length is also very variable; here and there, only a few granules are linked together, while in other parts there are several dozens of them. The branches which spring from them are sparse, generally very short, and always single; the direction of these filaments is in the longitudinal axis of the hair. I have never seen them hanging from the outside, unless I had torn the sheath of hair, or the whole hair, by rubbing it to and fro on the glass, after it had been netted on for an hour by strong liquid potassæ. On the surface, one often indeed sometimes sees regularly arranged filaments surrounding the hair; but the most beautiful and conspicuous are these transverse granular filaments, at the place of exit of the hair from the epidermis. In the latter, which often remains hanging when the hair is torn out, are usually some pretty numerous groups of granules (sporidia), and here and there a granular filament comes into view, which passes transversely across the hair, or even seems to end in it.

I could not ascertain with precision the entrance of the filaments of the dependent epidermis into the hair; but I have no doubt that such is the case, because these granular filaments are most abundant at the above-mentioned point of exit; moreover, they decrease as they proceed upwards, and disappear at the end of two or three lines; they extend some way down, but not in such numbers, and do not seem to reach the hulk. The point of concentration of these filaments is, then, the place where the hair emerges from the epidermis; it is here surrounded with the vegetations of favus. In order to establish the fact that the filaments in the hair are really fungous growths, it is necessary to examine fungi, but especially those of favus, under the action of strong liquor potassæ. There also is an extrication of gas under the microscope; the sporidia and thallus fibres are not dissolved, but are rendered more conspicuous, while the epidermis cells become faint. Dr. Hebra perceived the development of a fetid gas in his researches, when fungi were exposed longer than usual to the action of liquid potassæ.

With regard to the frequency of this appearance, it is to be observed that in most cases of favus, it is possible to find these fungi in the hair, especially when light. When it is dark-coloured, it requires to be macerated about half an hour in strong liquor potassæ; but in light hairs, the sporidin can be seen in from five to ten minutes.

This remarkable circumstance—the growth of fungi in the interior of the hair in favus—gives an explanation of its well-known dryness and brittleness, for the nutrition of the hair must be interfered with by the parasitic structures. Moreover, these observations throw light on the long known rule in dermatology, that, in order to cure favus effectually, the hair must be removed. *London Journ. Med.* March, 1850, from *Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*. 1849.

22. *On Anemia from Diminished Proportion of Albumen in the Blood, and on the Dropsies which it occasions.* By MM. BECQUEREL and RONIER.—The following are the conclusions appended to the memoir on the above subjects, published in the *Gazette Médicale de Paris*, No. xv., 1850.

1. Besides the form of anemia which results from a diminution in the proportion of the blood corpuscles, we must acknowledge the existence of another pathological condition, characterized by the low proportion of the albumen of the serum.

2. This diminution of the albumen of the serum may be rapidly produced; it is then announced by paleness, by a yellowish tint in the complexion, by great debility, and, above all, by general anasarca, without albuminous urine.

3. A great number of acute dropsies, which, at the present time, are regarded as special diseases (*essentièlles*), ought obviously to be attributed to this pathogenic cause.

4. The diminution in the albumen of the serum may also be *slowly* produced; it then constitutes a chronic pathological condition, which betrays itself by certain symptoms—the pallor and yellow tinge of the face, extreme debility, and, finally, general dropsy, more or less considerable, without albuminous urine.

5. The greater proportion of the dropsies which used to be considered *essential and passive*, may be referred to the preceding section.

6. Diminution in the amount of the albuminous constituents of the serum, whether produced by an acute or by a chronic process, is quite independent of the diminution of the amount of blood globules. These two alterations of the blood are, however, very frequently found to co-exist, and sometimes the one, sometimes the other, predominates.

7. A diminution in the proportion of the blood globules is incapable of inducing dropsy, unless associated with diminution in the proportion of the albumen of the serum.

8. The additional symptoms which are superadded to those above mentioned, when diminution of the blood corpuscles complicates the case, are, a “bruit de souffle,” with the first sound of the heart, a continuous “souffle” in the jugulars, or an intermitting one in the carotids, dyspnoea, and palpitations.

9. The causes capable of determining the slow and chronic loss of the albumen of the blood are insufficient alimentation, considerable losses of blood, long-continued diarrhoea, the influence of terrestrial miasmata, &c.

10. The production of the same effects under the influence of organic diseases, such as heart affections, or granular disease of the kidney, constitutes a true cachectic condition, a cachexia.

11. The pathological condition to which the term *enchætic* is generally applied, is nothing but the assemblage of symptoms resulting from diminution of the albumen of the serum, united or not with some diminution in the amount of blood corpuscles. The first of these causes accounts satisfactorily for the frequency of dropsies in such cases, for the discoloration of the skin, and for the extreme state of weakness likewise described. The second explains the “bruits,” cardiac and vascular, the dyspnoea, palpitations, &c.

12. The preceding distinctions exercise an important influence, and ought to be taken into consideration, both in diagnosis, prognosis, and in the treatment of dropsies.

[MM. Beequerel and Rodier, in the preface to their essay, mention that diminution in the albuminous constituents of the blood was first observed, in connection with Bright's disease, by Drs. Gregory, Christison, and Bostock. The accuracy of their observations was confirmed by subsequent analyses by Rayer, Andral, and Gavarret, and the authors of the essay themselves. We cannot subscribe to the whole of the twelve conclusions above given. Acute general dropsy, without albuminous urine, disease of the heart, &c., is, in our experience at least, a very rare affection, and there is, we think, no reason to doubt that organic diseases, obstructing the circulation, may induce anasarca, without the intervention of the enchæxia from diminished albumen. But we acknowledge that, for the explanation of certain chronic œdematous conditions often observed in the progress of phthisis, during convalescence from typhus, from ague or dysentery, in chlorotic females, &c., the theory of MM. Beequerel and Rodier seems well adapted. We must object to the doctrine which connects the venous murmurs of anemia with diminution of the blood corpuscles, believing that there is not a particle of physical evidence to justify the authors in adopting it. True, analysis in such cases shows a small proportion of blood corpuscles, but how the impoverished condition of the blood operates in producing the sounds is unexplained, and by chemistry, of course, inexplicable.] *Monthly Journal of Medical Science*, May, 1850.

23. *On Chlorotic Tinnitus*.—From time to time, for years past, Dr. FROBIEP has met with, in delicate yet florid-looking girls, *tinnitus aurium* in various degrees, oftentimes accompanied with a considerable difficulty of hearing. He long treated these cases with every variety of means, without any good results. Bearing in mind, then, that symptoms of apparent congestion in chlorosis are

so beneficially treated with iron, he employed it in these cases, whenever the general condition and the white lips and gums, in even fresh-coloured countenances, seemed to indicate a chlorotic basis in the disturbance of the health; and he is very anxious to impress on practitioners the great benefit that ensued. No disease is more common than chlorosis, and none so often mistaken or overlooked in some of its forms, so that many young women lose several of the best years of their lives, merely because ferruginous preparations have not been administered for a few months.—*British and Foreign Medico-Chirurgical Review*, April, 1850, from *Froriep's Notizen*, Bd. x.

24. *Chemical Researches on the Nature and Cause of Cholera.* By R. D. THOMSON, M. D., of Glasgow. (Proceedings of Royal Medical and Chirurgical Society, Jan. 22d, 1850.)—In the first part of the paper, the author detailed the results of chemical analyses of the blood, urine, and intestinal discharges, in the cold, or "lymphatic," stage of cholera; and in the "biliary," or febrile stage. The main results arrived at were—I. That in the cold stage of the disease, the specific gravity of the blood, and of the serum separated from the clot, is increased; that the proportion of water is less than in health, by at least nine per cent., and in some cases by as much as seventeen per cent.; that both the organic and the inorganic components of the blood are proportionally increased in amount; but that the increase of the insoluble salts is much greater than that of the soluble. 2. That the intestinal discharges, in the cold stage, when of the true "rice-water" character, resemble closely, in their chemical composition, the fluids of hydrocele and hydrocephalus; that their flocculi are formed of epithelial scales, and the watery part of water, containing a small portion of organic matter (albumen) and salts (chloride of sodium, carbonate of soda, earthy phosphate, alkaline sulphate, and some lime). 3. That the small quantity of urine sometimes found in the bladder, in this stage, presented no apparent aberration from an ordinary standard. 4. That in the biliary, or febrile stage of cholera, the blood soon regains its normal proportion of water, or even an excess of it; and that the other constituents resume their natural relation to each other. 5. That the urine, in the biliary stage, in several cases contained albumen, but presented scarcely any other deviation from the urine of health, except in the amount of urea, which at first was deficient.

In the second part of the paper, the author described some experiments, instituted by him, with the view of determining whether any poison could be detected in the atmosphere. In one series of experiments, it was ascertained that no solid matter existed in the air; but ammonia was obtained from it in the proportion of 0.319 grains of caustic ammonia, or 0.731 grains of carbonate of ammonia to 1,000 pounds of air. By another series of experiments, it was determined that no carbon or hydrogen existed in the atmosphere, except in the states of carbonic acid and water; while carbonic acid was obtained in the proportion of one volume to 6,650 volumes of air.

The author inferred that *the cause of cholera is not a specific tangible poison introduced into the body from without, but rather a vicarious transference of the cutaneous excretion to the intestinal mucous membrane, dependent partly on atmospheric influence, and partly on a predisposing state of the system in those who are affected with the disease.*

Dr. BALR said that the author's hypothesis of the cause of cholera was not supported by the phenomena of the disease; for not only would the suppression of the cutaneous and pulmonary exhalations, and the transference of the fluids normally excreted by the lungs and skin to the intestinal mucous membrane, be inadequate to produce the enormous discharges which drain the system of its fluids; but it is a fact that the cutaneous exudation is, in many of the worst cases of cholera, greatly increased, a watery fluid being in these cases poured out by the whole surface of the skin, as well as by the mucous membrane of the intestines. The draining away of the watery part of the blood was certainly the main phenomenon of the disease, all, or nearly all, the others being secondary to and dependent on it. It undoubtedly was the cause of the coldness of the body; but it prevented the development of animal heat; not, he thought, by rendering the blood thick, and thus incapable of circulating quickly, as

suggested by Dr. Snow, but by rendering impossible those chemical changes which normally go on in all parts of the capillary system, and which are the source of the animal heat. The circulation in cholera is undoubtedly much retarded; but the rapidity with which the nervous system of the patients is affected by chloroform, inhaled into the lungs, shows us that the motion of the blood would still be sufficient to allow of some evolution of caloric, if other necessary conditions were present; but an essential condition for the normal processes of nutrition, and for the chemical processes on which the temperature of the body is dependent, seems to be the presence of a certain proportion of water in the blood; and it is most probably because this is wanting, that the body becomes cold. To the same causes are obviously to be ascribed the arrest of the natural secretions of the liver and kidneys, and the depressed state of other organic functions of the body; and even the remarkable condition of the mind, and of the sensitive and motor functions—their state of comparative integrity—not only affords evidence that the nervous and muscular systems are, in a great measure, independent of the watery part of the blood, so essential to the organic functions, but is itself a result of the loss of that part of the circulating fluid. Under ordinary circumstances, if the respiration continued so imperfect, and the secretion of urine were suspended for a long period, as they are in the cold stage of cholera, the blood would become charged with carbonic acid and urea, and coma would result. In the cold stage of cholera, the natural chemical processes of the body are brought nearly to a stand-still, by the loss of the water of the blood, and neither urea nor carbonic acid is formed in large quantity; the powers of the mind and of voluntary motion are therefore left comparatively unimpaired.

Mr. W. F. BARLOW could not discover how failures to demonstrate any poison in the atmosphere could lead to inferences of its non-existence. Probably it was so subtle as to defy all scrutiny. Could the poison of small-pox or scarlatina be demonstrated in the atmosphere? Yet, was there any doubt that the air could be made infectious by, and could communicate, those diseases? He had paid some attention to the state of the muscles in cases of cholera. Nothing was more marked than the extreme excitability of the muscles during life, and their extraordinary manifestation of irritability after death. The facts which related to these points were most obvious; but as to the causes of them, there were so many difficulties in the way of satisfactorily accounting for them, that he begged the few words which he had to offer might be viewed as suggestive, and not positive. The condition of the blood must be considered, if we would even approach a rational conjecture on the state of the muscles. It seemed pretty clear that there was a great defect in the formation of carbonic acid, in cases of cholera, and therefore in the production of animal heat. He had listened with interest to what had fallen from Dr. Baly respecting the failure of chemical changes in the blood, and their consequences. There appeared a broad difference between death in the collapse of cholera and death by asphyxia, as ordinarily considered; in the latter, noxious blood circulated, and impaired the irritability; but in the former, carbonic acid could not be carried freely through the system; if it were, coma would follow, and the heart's action would cease, even more quickly than it was observed to do. The elevation of temperature after death is very difficult to explain. It does not depend on the post-mortem muscular contractions, because extreme elevation of temperature has occurred when the contractions have not been met with. A formation of heat takes place sometimes after death; and in cases where the body was actually cold at the time of decease, the temperature has risen to 109° Fahr. As a suggestion, Mr. Barlow threw out the idea that this was caused by chemical changes going on in the blood after death, such as occur during life.—*London Journ. Med.* March, 1850.

25. *Gooseberry Disease.*—In Meiningen, a peculiar affection of the skin has been long known under the above name. Children seem especially liable to it; it is observed during the season of the year when the gooseberries become ripe; and only attacks those individuals who pluck the berries from the bushes, or are much in the gardens. The symptoms are intolerable itching of the skin, fol-

lowed by eruptions, commonly of the papular form, frequently vesicular or pustular. Sometimes erythematous patches or ulcerations are observed. The flexures of the joints, especially of the lower extremities, are the chief seats of the diseases; and its severity is generally proportionate to the fairness and delicacy of the patient's skin.

Dr. JAHN, of Meiningen, had, for several years, been familiar with this species of prurigo; had observed that the eating of gooseberries had nothing to do with its production, but that individuals who, without even tasting of the fruit, were much occupied in the neighbourhood of gooseberry bushes in gardens, were apt to suffer. The precise connection between the bushes and the skin affection, he discovered in the summer of 1848. On examining the legs of a girl who was suffering severely from the disease, he observed a large number of minute yellow points round the margins of some of the sores, and, on looking at a few of these through a microscope, he found the points converted into great spider-like insects. Professor Emmrich, of Meiningen, recognized these mites as specimens of the *Leptus autumnalis* of Latreille. Jahn has since discovered the insect in other cases of the disease; has ascertained that it is very frequently to be met with on the leaves of the gooseberry plant, and, as different species of the genus *Leptus* are known to attack the human skin, the origin of the gooseberry disease is no longer a mystery. Microscopic examination has shown that the orifices in the cuticle, leading to the glands of the skin, are likewise the passages which the parasite selects for its inroads. The treatment of the disease is very simple. If the patient ceases for a few days to visit the gardens, and washes the affected parts with soap and water, or with a lotion containing *hepar sulphuris*, a cure is soon effected.

Jahn mentions that there are certain circumstances in the topography of Meiningen particularly favourable to the development of the *Leptus autumnalis*, but it is highly probable that it may, in other localities, produce similar effects in warm moist seasons.—*Monthly Journ. Med. Sci.*, March, 1850, from *Jenaische Annalen*, Heft I., Band I.

26. *Cases of Abscess behind the Pharynx.* By CHRISTOPHER FLEMING, M. D.—The presence of abscess behind the pharynx in childhood, and especially in infants, is often difficult, and the following cases are therefore of some practical value:—

CASE I.—François Kelly, aged two months, was observed by his mother, a few days before her application to me at the Netterville Hospital,* to have a peculiar snuffle in his breathing, some difficulty in deglutition, and occasional attacks of dyspnoea of variable duration. In all other respects, the child was, and had been from birth, in excellent health. He was a well-thriven child, and his only nourishment was the breast. The "epidemic influenza" being then prevalent amongst the children of the poor, I considered these symptoms as premonitory of an attack of it, and directed my treatment accordingly, but the child did not improve. On the contrary, the symptoms above noted gradually increased in intensity, and severe fever was superadded. The child from day to day was intolerably restless; he could only suck for a moment or so, spasmodically snapping the breast in his mouth, when a violent paroxysm of dyspnoea would force him equally abruptly to drop it. In one of these paroxysms he was seized with a fit of convulsions, on about the eighth day from the date of his illness. This occurred about the middle of last month.

The features of the case now assumed a most alarming aspect, and a convulsive fit appeared to be momentarily threatened. The child lay in a semilethargic state, with the countenance full and bloated, and the features constantly undergoing changes from repeated muscular twitchings. The eyelids were half closed, and the eyeballs protruding. The tongue in perpetual movement, projected beyond the teeth and lips, as if too large for the mouth, a position which the mother remarked it retained within the last few days, during the casual slumbers of the child. In addition, the snuffle-breathing

* Mr. Torney, the resident medical officer at the institution, witnessed the progress of this case throughout.

was most intense, accompanied by a loud gurgling noise in the fauces, and the dyspnoea and dysphagia were equally urgent. All symptoms were aggravated by attempting to put the child to the breast. From the cries of the child, it was obvious the larynx was unaffected, and no physical indication of any thoracic lesion could be detected. Under all these circumstances, I directed my attention to the pharynx; the examination produced a most violent paroxysm of dyspnoea, during which the child was seized with a slight convulsive fit. I satisfied myself that an abscess existed there, and bringing to my recollection the fact I had recorded in my former communication, that a spontaneous discharge through the nose had taken place in the case of a child aged seven months, then reported, it occurred to me that I might, under the circumstances of this case, artificially imitate nature. I took my opportunity, and, rapidly passing my finger, pressed it with force against the abscess; purulent matter darted through the anterior nares. Afterwards the child appeared to suck with less uneasiness, and the respiration was improved. From day to day a variable amount of discharge took place from the nose, accompanied by very trifling alleviation in the prominent symptoms. The child, however, was able to take more nourishment, and the act of sucking was less distressing. About this time Mr. Colles and Mr. Wilmot saw the case, when the characteristic features of the abscess were still well marked. I was obliged more than once to make forcible pressure against it with my finger, to keep the opening free, and had yet doubts whether I should not make an opening through the mouth. With this view I consulted Sir Philip Crampton, being anxious as well for his opinion as that he should see a case of the kind in so very young a subject. In his examination of the fauces, so violent a fit of convulsions supervened that he recommended me to rest satisfied with the opening already made, as he observed the purulent discharge from the nose then present, and as, from the very limited capacity of the mouth of the child, and its great sensibility, risk might attend further interference. I acted on his suggestions, gave the child mild stimulants and nutriment, and enjoined that position whereby the matter could get free egress, as in the former case. The child is rapidly improving in health, and has lost all the alarming symptoms which existed. The snuffle-breathing has not as yet completely disappeared, but the respiration and deglutition are natural. The child can suck continuously, and is getting fat.

CASE II.—In July last, a young girl, aged eleven years, was brought to my friend, Dr. Montgomery, complaining of uneasy sensations about the throat and neck, which were to be dated to the latter end of the preceding April, and were not referable to any special cause. These sensations commenced with what is commonly termed a crick or stiffness in the back of the neck, and continued with variable intensity, causing more or less uneasiness, and often extreme pain in the ears. The movements of the head and neck were extremely limited, and necessarily measured with great caution to render them tolerable. The girl was delicate-looking, of strumous aspect and strumous constitution. Having had enlarged tonsils, and complaining of difficulty in swallowing, Dr. Montgomery's attention was early directed to the throat, where, after the lapse of six or eight weeks, a train of symptoms developed themselves, which led him to the conviction that an abscess was about forming at the back of the pharynx. Under these circumstances I saw the child, and I found all the symptoms to indicate its presence. The countenance was peculiarly expressive, the voice nasal and muffled, and the movements of the head and neck very remarkable. The latter particularly brought to my recollection similar movements attendant on disease of the cervical portion of the spine. The muscles at the back of the neck were in a semi-rigid state, the sterno-mastoid equally so; and in speaking, the action of the labial and nasal muscles gave a sort of tetanic cast to the countenance. The jaws were separable, but limitedly so, admitting a finger to pass between them. The tongue was easily protruded, but yet with a sort of spasmodic jerk. The head was almost fixedly retained in the horizontal position, the lower jaw at the same time projecting forwards, as if to accommodate the pharynx in its functions. The elevation of the head or its lateral movement was wholly impracticable, and from the manner in which they were performed, gave a very peculiar stamp to the countenance.

On stripping the thorax, a lateral curvature of the spine was visible; there was also extreme tenderness on pressure over the spinous processes of the cervical vertebrae, particularly their central portions. There were yet no other symptoms indicative of caries of the spine; there were no shooting pains along the arms, nor about the lateral portions of the head. In fact, there was, latterly, rather a disposition to alleviation than aggravation of the original symptoms. The local characters of the abscess were most marked; there was a general blush of the fauces, and immediately behind the soft palate, when the tongue was much depressed and at the same time not allowed to protrude, a passing glance caught the pharynx bulging forwards in the median line, where, pressure being made with the finger, most unequivocal fluctuation could be felt through a tense, elastic, membranous wall. The boundary of the abscess above could be measured by the finger with ease, but below it was gradually bevelled off, the sensation of fluctuation being communicated throughout. Dr. Montgomery's opinion being confirmed, the opening of the abscess was decided on, and effected by an ordinary sharp-pointed bistoury, protected to about half an inch from the point. In proceeding to open it, I depressed the tongue well with the fore-finger of the left hand, and endeavoured to cloak the glottis on the escape of the pus. The opening was accomplished with ease, and was made in a *transverse* direction; a large gush of matter darted forwards, so as to fill the depressed cavity of the tongue, and more escaped by pressure from below with the finger passed into the mouth. The child expressed herself much relieved, and her attendant remarked she was able to raise up her head. I fancied, also, that its lateral movements were effected with more ease. On the ninth day after the opening of the abscess, I again saw this little girl; she expressed herself as being much better; the varied movements of the head and neck, though yet imperfect, were much improved. On examining the throat, the site of the opening presented an ulcerated margin; it was exactly in the median line, and could be seen without much difficulty. On introducing the finger into the pharynx, much fulness was discernible, and I could discover that this extended a good way below the level of the opening. I satisfied myself no matter was lodged in the abscess; its anterior wall appeared as if detached from the spine, and it occurred to me that air might have kept it so. Syrup of the iodide of iron was directed, tepid salt-water bathing recommended, and every attention to improve the general health enjoined; Dr. Montgomery and I coinciding in the opinion that in this case it was to be apprehended some lesion of the vertebrae existed.

January, 1850. I have heard from Dr. Montgomery that the child has recovered from all previous symptoms, with the exception of a certain limited and studied movement of the head, and that the general health is perfectly restored.

The details of the above cases are given so much at length that it is almost unnecessary to add any remarks. The second case requires none. The age of the child, and the chronic character of the abscess, with the other attendant local symptoms, assisted in removing any difficulties which might otherwise arise, and no hurried measures were called for on the part of the surgeon. Its favourable termination, notwithstanding the more than probable connection of the abscess with spinal disease, is, perhaps, its most remarkable feature. Not so the first case; there, the tender age of the patient, the extreme acuteness and urgency of the symptoms, necessarily equivocal in their nature, and their purely local cause, tended most materially to obscure the diagnosis. I have recorded a case somewhat doubtful at the age of four weeks, but I have never before met with one so unequivocal in its nature at a younger period than four or six months. I have brought these cases forward at present, even at the risk of repetition, from the conviction of their importance in the catalogue of diseases to which children are liable, and from the impression on my mind that such affections of the throat too often escape observation; hence many children must fall victims to them, and many are subjected to treatment, if not inimical to, certainly wholly unfitted for their relief—treatment, from the nature of the attendant symptoms, necessarily active and severe. To my former communication on this subject I have little to add; the cases now reported

are but a confirmation of the statements then made.—*Dublin Quarterly Journ.*, Feb. 1850.

27. *On a Peculiar Disease of the Nasal Fossa.*—DR. JOHN GAIRDNER read to the Edinburgh Medico-Chirurgical Society, the following case:—

"The subject of my narrative was about fifty years of age, when he became affected with a common coryza of no unusual severity. While labouring under it, he was called to a piece of professional duty at a considerable distance. It was early in May, and he had to travel twelve miles of his journey in an open vehicle, and under a chilly atmosphere—the last four miles being after sunset. His coryza was thus very sensibly increased, and it became still more troublesome after his return. A week after the date of his journey he was obliged to take to bed for four days, in consequence of feverishness, headache, and excessive coryza; which last symptom was then, for the first time, attended with a most distressing fetor. The fetor proceeded exclusively from the right nostril, from which also the discharge chiefly came. The matter was thick and opaque. There was considerable pain in the right superior-maxillary region, and also behind the mastoid process, at a point about one inch below the insertion of the right trachelo-mastoid muscle. The discharge, which was at first excessive, gradually diminished, along with the other symptoms, and he was enabled to resume his professional duties in less than a week from the time he took to bed.

Such was the commencement of a disorder which hung about him, in a subdued form, for several years. After the subsidence of the acute symptoms, his ordinary condition was as follows:—He had—1, a constant sense of partial obstruction of the right nostril, requiring some degree of force to impel air through it; 2, more than the usual amount of mucous discharge from that nostril; 3, inability to incline his head forward without causing a necessity for the use of his handkerchief; 4, fetor, not constant, not even frequent, as it occurred only once or twice a-day, and for a minute or thereabouts at a time; rarely perceptible by others; always accompanied, when it did occur, by a sensation of the escape of some fluid into the affected nostril; and usually followed by the discharge of a pellet of matter, which was thicker and yellower than the ordinary mucus of the nostril; 5, pain in the region of the right superior maxillary bone; it was a dull pain, not constant, but seldom absent for above a day, or two days at most. 6. To these things, I must add that the discharges from the two nostrils, microscopically examined, presented very different characters—that of the right nostril containing pus globules, while that of the left exhibited no characters at all different from those of the healthy secretion of the Schneiderian membrane. All these symptoms, and especially the fetor, were immediately and greatly increased by every inflammatory cold which affected the nasal fossa.

After the lapse of seven years and a half from the first invasion of this disagreeable disorder, he was lately seized with a catarrhal affection, accompanied by coryza, fetid discharge from the nostrils, and some headache. The attack was in no respect different from many attacks which he had had at various periods for some years before it. But, immediately after its cessation, he remarked with satisfaction that the fetor was gone, and the habitual discharge from the right nostril greatly diminished. The sense of obstruction in the nostril, the stillieidium upon inclining the head forward, and the pain in the maxillary region, had all undergone a great change for the better. The change has been progressive—and he is now so free from all these symptoms that his cure may be regarded as nearly complete.

On a retrospect of this case, it appears probable that the exposure in which it originated had caused the death of a minute portion of bone within the nostril, possibly of a part of the spongy bone, and that the exfoliation of this portion was the cause of the cure. That its escape was not observed by the patient is not against this supposition; as a very inconsiderable fragment would suffice to account for everything.

It may be right that I should make this history complete, by stating that the patient is of a healthy constitution, that he has not been subject to glandular

swellings, or any form of strumous disorder, that he never took mercury except in the form of a purgative of calomel, and that not half a dozen times in his life, so far as he can remember; and that he never in his life had any description of venereal disorder.

Two things must be mentioned with regard to his family. One is, that his mother certainly suffered from some analogous affection some years before her death; she did not indeed complain of it, and therefore he cannot supply any minute information about it; but her handkerchief gave sufficient evidence of more than usual discharge from the nostrils, and of its being thick, and, as he thinks, somewhat fetid.

The other fact alluded to is of more interest. His brother, who is also of the medical profession, experienced a similar attack in his own person. In him the complaint did not supervene suddenly, but was the result of repeated and neglected colds. For forty years of his life he scarcely ever required the use of a pocket-handkerchief. For two years he used two every day; and, when dry, they were always glued together in the manner that is caused by a discharge from an excited mucous surface. The discharge was manifestly fetid at times, though not constantly. This was not felt by himself, for the sense of smelling was then, and still continues to be, much blunted. After two years, during which time the discharge had flowed pretty copiously, and at times so freely as to be a very great inconvenience, a gradual abatement was observed: and, about this period, he was aware of some traces of osseous matter. The right nostril was much more affected than the left, but his pain was confined to the region of the frontal sinuses, and was dull, not acute. He has still a constant moisture of the right nostril, which becomes copious, not with colds only, but with any disturbance of health, and has occasionally fetor. He thinks the sense of smelling is returning. He still uses a handkerchief every day; but he remarks that when it is dry it is not now, as it formerly used to be, hard and stiff as a board. It is, therefore, evident that a great change has taken place, indicating a diminution of fibrinous exudation, and an approximation to a cure of his disease.

Under the title *ozæa*, in a variety of systematic works, will be found descriptions of a form of disease similar to the above, which are usually accompanied by an unfavourable opinion with regard to the chance of its removal. The prognostic, I have no doubt, is well founded in many instances. But I am inclined to think that where, as in the cases just related, there is neither cancer, nor struma, nor syphilis, nor mercurial crethism to contend with, the case will generally end in a cure. It is probable that such cases are seldom watched from beginning to end by those who have described them, and that they have therefore sometimes been erroneously judged incurable merely on account of their tediousness.—*Monthly Journal*, April, 1850.

23. *Erythema Nodosum*.—Dr. BEGIE read to the Medico-Chirurgical Society of Edinburgh (March 20th, 1850), a communication on erythema nodosum, and its connection with the rheumatic diathesis. After some remarks upon the advantage of studying the symptoms which indicate the morbid state of organization on which diseases depend, and which are apt to be neglected by the superficial observer, Dr. B. proceeded to describe the eruption and course of erythema nodosum. He then detailed some very interesting cases from his own practice, in which the appearance of the eruption was preceded by a state of general cachexia, resembling that which is observed before an attack of rheumatism. In some of the cases there were deep-seated pains in the limbs and joints, and, in the course of the disease, abundant acid perspirations, and deposit of lithates in the urine. The sulphate of quinia had been recommended by Dr. Watson as useful in erythema nodosum, and in Dr. Begbie's practice it had always proved efficacious. The use of bark in rheumatism had been long ago recommended, and still had its advocates among the best informed physicians of the day. The connection between the skin disease and rheumatism was inferred, 1stly. Because erythema nodosum, rheumatism, and the rheumatic diathesis are most frequently, if not exclusively, confined to the young and those under thirty years of age. 2dly. Because these diseases are frequently

associated with disorders of the menstrual function. 3dly. Because a disordered state of the general health, characterized by pallor, cachexia, and defective excretion, precedes the eruption, and is subsequently developed in febrile excitement, pains in the joints and muscles, and copious lithic urinary deposit—symptoms all common in rheumatism. 4thly. The erythema is often associated or alternates with rheumatic fever, and is often complicated with those internal disorders with which rheumatism is allied, particularly pleurisy and pneumonia. 5thly. Remedies of reputed efficacy in rheumatism, such as quinia, are equally efficacious in erythema nodosum. Dr. B. pointed out the practical importance of bearing in mind the connection which seemed to exist between these diseases, and, in particular, of not neglecting the disordered state of the digestive and assimilating functions—often the only departure from health which the physician is called upon to treat for days, or even for weeks, before the appearance of erythema, or the occurrence of a paroxysm of acute rheumatism.—*Monthly Journal of Medical Science*, May, 1850.

29. *Therapeutical Effects of Turpentine*. By THOMAS SMITH, M. D.—The diseases for which turpentine has been prescribed, and which have been materially relieved by it, are extremely numerous; there is scarcely one, whether acute or chronic, sthenic or asthenic, which has not been successfully treated, if the testimony of some of the first practitioners of the age is to be credited, by the medicine under consideration. It would be a useless task to cite all the cases and all the maladies in which the admirers of this drug have found it advantageous. Suffice it to say, that in every instance where prejudice has not interfered, and where ignorance has not prescribed, this drug has obtained favour and proved itself a faithful friend.

In passing in review the numerous disorders for which it has been ordered, as I wish this paper to have a practical bearing, I shall dwell as briefly as possible upon all those which have not come under my own immediate observation. Those who desire a more extensive acquaintance with the nature, properties, and uses of this drug than is to be met with in these sketches, will do well to consult the pages of our monthly and weekly periodicals, which, for the last thirty years, have occupied a prominent place in the medical literature of Europe and America. The writings of Dr. Copland, Paris, Pereira, Eherle, Thompson, Brande, etc., the *Dictionnaire de la Matière Médicale*, and the records of ancient medicine, contain an amount of valuable information regarding the properties of turpentine. In common with other medicines, its therapeutic effects are liable to be modified by numerous circumstances: viz., the seasons of the year, the idiosyncrasies, age, or sex, of the individual, the special or general cause of the malady, or its occurrence before, or subsequent to, any general or universal epidemic.* From a neglect of these precautions, many really valuable remedies have, though somewhat undeservedly, fallen into disrepute.

As a rapid and safe counter-irritant, there is no drug more efficacious than

* It is a remarkable fact that after any severe visitation, such as epidemic cholera, the human frame undergoes an extraordinary change. Many will, I have no doubt, recollect how general was the custom to abstract large quantities of blood in fevers and inflammatory disorders previous to 1831. Venesection was the practice of the day. On the advent of the epidemic influenza of 1833, general bleeding, even in maladies of a high phlogistic character, could not be adopted with safety; numerous lives were doubtless sacrificed, ere this change in the human constitution—its inaptitude to bear excessive depletory measures, was fully appreciated and understood. We are now approaching an epoch (if we have not already entered it), in which the vital phenomena of the animal organism will manifest themselves differently under the influence of remedial agents. If my observation does not deceive me, I am inclined to believe that this great climacteric change, on the completion of the cycle of the late formidable and universal epidemic, will mainly develop itself, by inducing a lax condition of the intestinal tube. I have noticed, that patients who have been accustomed to take large quantities of aperient medicine, now rarely require it; and when it is needed, a smaller portion is found sufficient. This is not confined to the aged, for even in children I have witnessed a similar alteration in their former habits.

warm oil of turpentine or camphine. I have never known an instance of its acting injuriously when thus applied; it never produces strangury or any uneasiness of the urinary organs, like preparations of emtharides; and here I fully coincide with the opinion expressed by the late Dr. Ryan, that when counter-irritation is deemed imperatively necessary in severe acute diseases, as cerebritis, hydrocephalus, pneumonia, enteritis, peritonitis, or hepatitis, it is an extremely inert and unjustifiable practice, to wait for twenty-four hours for the irritating effects of a blister, when the same may be produced in as many minutes by epithems of warm oil of turpentine.

Veterinary surgeons have condemned the external use of turpentine as an epispastic; it has been asserted that, when applied to the horse, it prevents the hair from growing. I do not think this correct. Some years ago I had a gray mare, which was seriously injured about the head and forelegs by an accident. Contrary to the recommendation of my veterinary surgeon, who insisted upon the application of tincture of myrrh, and greasy unguents containing gunpowder, I determined for once to try the experiment, if an injury to a horse might not be remedied by the same means as one in a human subject. I had the wounds carefully fomented and poulticed, and afterwards applied an ointment, consisting of resin ointment and oil of turpentine. The animal recovered without any material disfigurement. Last year I had a black horse consigned to me by a friend in Yorkshire, which met with a severe accident in its transit on the railway. The horse was treated in the same way as the one above, and in a few months was perfectly restored, without any other blenheim.

The liniment, by means of which the celebrated quack St John Long was supposed to have performed miraculous cures, was a mixture of the oil of turpentine, pyroligneous acid, and yolk of egg.*

As a *remifuge*, turpentine has been given in the form of Chabert's oil. This is made by mixing one part of the empyreumatic oil of hartshorn, with three of oil of turpentine, allowing them to stand for three days, and afterwards distilling off three-fourths of the mixture by the aid of a sand bath. It very soon becomes blackened, by exposure to the air, and therefore ought to be kept well corked, and excluded from the light. It is extremely nauseous; and, on that account, is not likely to come into general use.

As a *purgative*, turpentine ought never to be administered alone, in large doses, during the winter, or in cold damp weather: because under these circumstances, it tends, in common with other hydrocarbons, to supply fuel to the body for the evolution of animal heat, rather than exert any therapeutic property. Indeed, I very much question the propriety of giving it alone, as a purgative under any circumstances whatever. There are some writers who do not hesitate to recommend it in doses which I consider unjustifiable. In winter, cerebral congestion may supervene; in summer, intractable diarrhoea, from over-excitement of the mucous membrane of the bowels. The case of Dr. Copland furnishes an instructive example on this head: ten drachms of the oil of turpentine were swallowed, and failed to induce action of the bowels or kidneys; the consequence was, high cerebral excitement, followed by a train of unpleasant symptoms, which it would be dangerous, in some constitutions, to excite.

Turpentine is, however, often a valuable addition to other purgatives, as it possesses the faculty of increasing their activity in a remarkable degree. I have known a lady, who, for forty years, was unable to procure an evacuation without the most drastic purgatives. She succeeded in obtaining daily action, by the simple combination of a teaspoonful of castor oil with ten drops of oil of turpentine. I have had another case under my care, where the same combination enabled me to relieve the augmented suffering occasioned by obstruction of the bowels from chronic meningo-myelitis of several years duration.

Whatever may be the object for which turpentine is exhibited as a purgative, whether for the expulsion of parasites infesting the human body, or as a reful-

* This liniment is an excellent counter irritant. We used it as an external stimulant in some cases of cholera during the past epidemic, as recommended by Dr. James Bird; and we frequently employ it as a counter-irritant in phthisis, and other chest diseases.—
EDINBURGH.

sive in cerebral affections, the dose should never exceed half an ounce at one time; and to insure its purgative action, it ought to be united with some other aperient, as castor oil, compound infusion of senna, sulphate of magnesia, or the decoction of the bark of the root of the pomegranate. If prescribed in the above dose, in conjunction with any other active purgative, we run little risk of inducing strangury, or any other unpleasant symptom. It may be repeated at intervals of four hours, with perfect safety. Though some authors have stated that the dose of the oil of turpentine may be from half an ounce to two, or even four ounces, he must be a very bold practitioner who would take this suggestion for his guide. If the first-named quantity will not suffice for the destruction and consequent expulsion of a tænia, a larger amount given at one time will equally fail; for it is not by the aperient properties alone of the *medicinae* (as I shall hereafter show) that the death of the worm is effected.* As a *diuretic*, the dose may be from five to thirty drops, taken in any aromatic water, or mineral saline. I have rarely found patients object to its use, when exhibited with the salines of either Cheltenham or Harrogate; and the numerous cases in which I have prescribed it, in conjunction with the waters from these mineral springs, have convinced me, that this union is especially indicated where we are anxious to direct its influence to the renal organs.

As an *astringent*, in doses varying from 20 minims to a drachm, according to the urgency of the symptoms, and repeated every three or four hours, turpentine is one of the most efficacious remedies which we possess. The best vehicle for its administration, in the first place, is water, flavoured with syrup of orange, or any other agreeable aromatic. It may afterwards be advantageously combined with any other therapeutic agents, which the special nature of the case may require: thus, in epistaxis depending upon rupture of one or more small vessels, and where much arterial blood has been lost, muriated tincture of iron will form a valuable adjunct. In hæmatemesis and other sanguineous discharges from the bowels, it may be united with compound infusion of roses, sulphate of magnesia, feed-water, and solutions of tannic or gallic acid. In some forms of hæmoptysis, it may usefully be added to infusions of matieo; in hæmaturia, to the decoctions of uva ursi, chimaphila, pyrola, etc.; or to tincture of sesquichloride of iron, etc. In purpura hemorrhagica, the decoctions or infusions of the barks form with it an excellent adjuvant. In hæmoptysis, it has speedily and effectually arrested the hemorrhage; and is a much safer remedy than lead.

In my experience, there is no single medicine in the materia medica that can be compared with it as a *styptic*, either as to certainty of action or to the safety of its effects. It is compatible alike with acids and alkalis.

The *external use* of turpentine has been very general for a great number of years, alone or combined with other rubefacients, such as mustard, strong liquor ammoniac, pyroligneous acid, capseut oil, wine of hellebore, colchicum or opium, tartar emetic, croton oil, etc. It has very frequently been found of permanent utility, when applied as a warm epithem to the skin in pulmonary affections. Its action is twofold; first, it induces rapid though often transient counter-irritation; secondly, its vapour is inhaled into the lungs, and by its constringent operation on the extreme capillaries of the pulmonary texture, is not infrequently productive of great relief in some affections of these organs. For the purpose of inhalation, I am in the habit of dispersing its vapour through the room by evaporating water containing a portion of it, by the aid

* There may be special cases, but they will be extremely few, in which an extraordinary dose of any particular medicine may be peremptorily called for by the condition of the patient. For instance, I once gave to a man labouring under delirium tremens, seven grains of the acetate of morphia, in divided doses, within two hours, ere I could allay the inordinate and convulsive movements, and restrain the shrieks of the wretched sufferer. Again, at another time, I exhibited to a female, in the presence of Dr. Logan, twelve ounces of sulphuric ether, when the principles of etherization were first introduced, and kept this woman in a state of insensibility for upwards of six hours. Although both these cases did well, they are exceptional ones, and ought never to be imitated, except in emergencies of the most urgent description.

of a spirit lamp. When thus diffused through the atmosphere, it may be breathed for two or three hours in the course of the day, by the most delicate-chested person, and often with the most marked and striking amelioration of their pectoral symptoms.

Long after the patient has left the room, he is conscious of the taste and smell of the turpentine. I have often detected its presence some hours after he had been submitted to its penetrating influence. I have also employed camphine in the form of a bath, mixed with common soda; or two pounds of the latter with from a quarter of a pint to half a pint of camphine, and half an ounce of oil of rosemary, will form an excellent bath. In delicate skinned patients, females and children, $\frac{3}{4}$ of camphine will be sufficient. I may remark, *in limine*, that the alkaline camphine bath possesses virtues peculiarly its own. In the coldest day in winter, as I have verified in more than one instance, it may be employed with the most perfect safety. Whilst the individual is in the bath, he experiences, to my knowledge, no disagreeable annoyance from the disengaged vapour; on the contrary, if we except the taste of the turpentine, which for some time remains in the mouth, a sense of calmness and tranquillity very often follows a previously disturbed, irregular, or excited condition of the respiratory or sanguiferous systems. After five minutes' reumbrancy in the bath, the pulse is found to become fuller, softer, and slower; I have seen it fall from 100 to 80. The respiration also becomes freer, deeper, and less laboured. On coming out of the bath, the whole skin has a peculiar velvety, soft, and agreeable feeling; the breath is strongly tainted with the terebinthinaceous odour. If it have not been too hot, a pleasurable tingling warmth is experienced throughout the whole cutaneous surface; and this, with the preceding symptoms, may continue twenty-four hours. One great advantage of this bath will be found in the circumstance, that it may be employed at a heat from 10 to 15 degrees below the temperature of the ordinary warm one, without inducing that sensation of chill to which some delicate constitutions are so peculiarly obnoxious; ten or fifteen minutes is the length of time a patient ought to remain in a bath of this description. In the first instance, it is well for patients to commence with a smaller quantity of the turpentine and soda, say a pound of the latter with two or three ounces of the former, and gradually increase its strength on each repetition of the bath; to the first-mentioned proportions. This bath may be taken every second or third day, according to the urgency of the symptoms and the nature of the affection for which it is prescribed.

I come now to a more particular enumeration of the maladies for which turpentine and its preparations have been chiefly recommended. They are—sanguineous exhalations from the mucous surfaces, epistaxis, hæmoptysis, melæna, purpura hemorrhagica;* consumption, chronic bronchitis, mucous or purulent discharges from the urethra;† grubs infesting the urethra, trœnia, ascarides;‡ typhoid, yellow and puerperal fevers, plague;§ abdominal obstructions, strangulated hernia, tympanitis, colica pictonum, biliary concretions;|| traumatic tetanus, trismus;¶ apoplexy, hydrocephalus, acute and chronic, epilepsy;** neuralgia, sciatica, rheumatism;†† diabetes, dropsy;‡‡ inflammations of the

* Adair, Brooke, Cheyne, Clutterbuck, Copland, Elliotson, Hunter, Mageé, Nichol (W.), Thompson, Vincent, Younge.

† Aretæus, Celsus, Dioscorides, Vnn Swieten.

‡ Birkbeck, Cross, Fenwick, Fothergill, Gomés, Hancock, Hartle, Kennedy, Knox, Laird, Lettsom, Maldon, Mello, Ozanam, Pereira, Saner, Winstone.

§ Atkinson, Blundell, Breian, Chapman, Copland, Cullen, Douglas, Forre, Faulkner (Sir A. Brooke), Fernndez, Gooch, Hamilton, Holst, Johnson, Kinneir, Moran, Payne, Physick, Pritchard, Wood.

|| Boerhaave, Durand, Gibbon, Green, Guyton de Morveau, Hnll (Marshall), Hamilton (C. B.), Kinglake, MacWilliams, Odier, Paris, Ramæbotham, Sewell, Sprengel.

¶ Gibbon, Hutchinson, Mott, Phillips.

** Latham, Lithgow, Money, Moran, Percival, Pritchard, Young.

†† Bonnet, Cheyne, Dueros, Dufour, England, Hild, Home, La Roque, Lenton, Martinet, Maton, Pitcairn, Recamier, Thilenius.

‡‡ Darwin, Werlhoff.

eye;* cholera, renal hydatids, suppression of urine;† burns, wounds, poisoning by prussic acid or opium, salivation.‡—*London Journ. Med.*, April, 1850.

30. *Remarks on Vermifuges.*—DR. CAZIN, of Boulogne-sur-Mer, having had the opportunity of treating a large number of worm cases, has published the following interesting account of his experience. He states that he has frequently employed the common spigelia, or worm-grass. He administers it in the form of decoction, prepared by boiling two drachms of the herb in a quart of water to one-half. The decoction is then expressed, strained, and flavoured with a little lemon-juice and a sufficient quantity of sugar. The dose for an adult is two wineglassfuls, followed by a wineglassful every six hours until the desired effect is produced. To children and delicate persons a smaller quantity is to be given.

Wormwood (*absinthium*) is an excellent indigenous anthelmintic; it is also a powerful tonic and stimulant, the use of which, continued after the expulsion of the worms, prevents their reproduction. M. Cazin often uses a wine prepared by digesting an ounce of wormwood, with an equal quantity of garlic, in a bottle of white wine, of which he gives from one to three ounces every morning. This wine is well-adapted for poor lymphatic subjects, wasted by wretchedness, and suffering from the influence of a marshy soil. The *absinthium maritimum* is likewise a very good anthelmintic. M. Cazin gives it to the extent of one or two drachms boiled in four or five ounces of water, with the addition of some white sugar, or of any anthelmintic syrup. This is quite a popular remedy in the maritime districts, and almost always succeeds with children affected with worms.

Although a case of poisoning by *Cevadilla* has been reported, M. Cazin has administered this vermifuge with success in cases in which ordinary anthelmintics had but little effect; but he has always commenced with a very small dose, in order to ascertain how far it would be borne by the digestive organs. For children, the dose of this plant is from a grain and a half to four or five grains of the powder of the seeds, mixed with syrup of rhubarb; for adults eight or nine grains, with the addition of a little sugar and a few drops of oil of fennel. In each case the dose is to be repeated daily for four days, after which the infusion of chamomile is to be given.

Assafœtida possesses acknowledged anthelmintic properties, and is suitable for cases of sympathetic nervous affections produced by the existence of worms. It thus, like valerian, fulfils a twofold indication. In a case of nervous affection, which M. Cazin believed to be idiopathic, the administration of *assafœtida* both determined the disease and revealed its true cause, by effecting the expulsion of a number of lumbrici. This result has, in three cases of chorea and in two of epilepsy, enabled him to recognize that sympathetic irritation—depending on the presence of intestinal worms—was the sole cause of disease in these instances. Under ordinary circumstances, M. Cazin frequently combines *assafœtida* with calomel in pills. This combination, of all those that he has employed, succeeds best in expelling lumbrici. He has also combined it with black oxide of iron, particularly in anemic patients. *Assafœtida* may be given in powder, in doses of from four grains to half a drachm.

The essential oil of turpentine is not merely useful in cases of tænia, it is also decidedly efficacious in expelling the lumbrici. M. Cazin has sometimes, in cases of lumbrici and ascarides, administered with advantage turpentine, enemata, prepared by suspending, by means of yolk of egg, from one drachm to half an ounce of the oil in decoction of tansy, *absinthium*, worm-seed (*scemen-contra*), or Corsican moss.

Common salt is very destructive to worms; it is given alone in large doses dissolved in water; it should be taken on an empty stomach. M. Cazin also frequently administers it in the form of enema, with brown sugar, linseed or

* Burke, Carmichael, Foote, Guthrie, Hynam, Langier, Middlemore, Wright.
† Bayle, Copland, Neale, Pereira.

‡ Emmert, Geddings, Hanolt, Heister, Jenkins, Kentish, King, Orfila, Paré (Ambroise), Percy, Pott.

poppy oil, and a sufficient quantity of water. With children it almost always succeeds.

Like all tonics, iron has the advantage of destroying worms, at the same time that, by imparting tone to the intestines, it prevents their reproduction. From six to eight grains of iron filings, mixed with an equal quantity of rhubarb, and taken twice or three times a day, have often been sufficient to expel the worms contained in the intestines. M. Cazin succeeded in rapidly curing a boy nine years of age, emaciated and pale, whose sleep was disturbed, and who was suffering from spasmodic movements similar to those which characterize chorea, by the exhibition of pills of sulphate of iron, combined, according to Fuller's formula, with aloes, senna, &c., under which treatment he voided twenty-three lumbrici in four days. He has also used with remarkable success Bosen's mixture, containing extract of black hellebore and sulphate of iron. But what he chiefly gives to children, as well as to adults, is the syrup of citrate of iron (four parts of citrate to sixty of simple syrup, and one of essence of lemon), in doses of from two drachms to half an ounce to children, and from half an ounce to two ounces to adults.

M. Cazin remarks that calomel, so efficacious as an anthelmintic, ought never to be combined with an alkaline chloride, as the formation of corrosive sublimate would probably ensue from their admixture. In like manner, the combination of calomel with cherry-laurel water, or emulsion of bitter almonds, would give rise to the development of two formidable poisons, corrosive sublimate and cyanide of mercury.

The effects of the male fern, tin, pomegranate bark, hellebore, &c., require merely to be noticed; and the properties of the pomegranate root bark are so well known that they need not be dwelt upon. M. Cazin has remarked nothing particular respecting other anthelmintics. He merely says that cod-liver oil has succeeded with him in the cases of two females, one of whom passed twelve lumbrici the same day that she had taken in the morning three tablespoonfuls at intervals of an hour.

But, whatever be the medicine selected, we must not, like routine practitioners, be content, when the worms are killed and dislodged, with this merely palliative cure. A very important indication remains to be fulfilled, viz., to prevent their reproduction. This object is attained, according to M. Cazin, by the adoption of a tonic and stimulant regimen, which must be long continued, and, above all, by the employment of bitter and chalybeate preparations. He has found the ferruginous chocolate to be sufficient, in the case of children, to prevent the relapses which are for many years very apt to occur. Wine taken while fasting has succeeded with the poor inhabitants of the marshes, accustomed to live only on vegetables and milk; and he has also remarked its efficacy as a preventative of worm affections in other instances.

To these observations of M. Cazin, the editor of the *Journal de Médecine* has appended the following practical remarks. The number of experiments tried by M. Cazin leaves no room for doubt respecting the enormous amount of worm affections which he must have met with. Such a result may appear strange to Parisian physicians, who attribute to the presence of worms in the intestines only a very trifling influence over the symptoms formerly ascribed to them. But if worm affections are rare among the inhabitants of large towns, they are frequent and generally more serious among the peasantry, and particularly among those who are poor and placed in unfavourable hygienic circumstances. We shall, therefore, take the present opportunity of mentioning the efficacy of *broun santonine*, lately brought under the notice of the readers of the *Bulletin de Thérapeutique*, by M. Gaffard, an apothecary at Aurillac.

The difficulty experienced in procuring pure santonine, both on account of its high price, and for other reasons, has induced M. Gaffard to endeavour to obtain from *worm-seed*, a product which may possess the advantages of the former, and at the same time be free from the objections to the use of the latter. This product he calls *broun* or *impure santonine*; it is obtained in the following manner:—

Take of Aleppo worm-seed, three ounces; carbonate of potash, one ounce; slacked lime, sifted, half an ounce; water, from three pints to three pints and a half. Place the mixture on the fire, stirring occasionally with a wooden spa-

tula; let it boil for an hour; on removing it from the fire pass it with expression through a linen cloth, let it settle, decant, and add hydrochloric or nitric acid until it reddens litmus without being sensibly acid to the tongue. Allow it to rest, pass it through a filter previously moistened, or through a piece of close canvas, and allow the product which remains on the filter to dry in the open air until it acquires the consistence of firm butter. This product, which is a mixture of santonine, resin, and essential oil, will answer for the various pharmaceutical forms in which the practitioner may wish to exhibit it. M. Gaffard gives it in the form of lozenges composed as follows:—

Brown santonine, three drachms; powdered sugar, thirteen ounces; powdered gum, one ounce and a half; essential oil of lemon, twenty-five drops. Place the brown santonine in a marble mortar; add by degrees, and with constant trituration, the sugar mixed with the essential oil and the gum, so as to make a homogenous powder. Form with a sufficient quantity of water a mass of the desired consistence, and divide it into lozenges, each of which shall weigh, when dried, fifteen grains; each lozenge will then contain somewhat more than one-third of a grain of brown santonine.

For infants under six months the dose will be one lozenge night and morning; from six months to a year, two lozenges night and morning; from one to two years, three, and from two to four years, four night and morning; for children of five years and upwards a lozenge for each year of the child's age should be given night and morning. The medicine to be continued until the desired effects are no longer produced.—*Journal de Médecine et de Chirurgie Pratiques*, March, 1850.

[A remedy for tape-worm, which has been for some time employed in France under the name of koussou, has been recently tried in King's College Hospital, London, with marked success. It is an infusion of the dried flowers of the *Brayera anthelmintica*, a native of Abyssinia, in which country it is a popular remedy for this worm, which is very prevalent amongst the inhabitants. A single dose, which is prepared by macerating for a quarter of an hour half an ounce of the dried flowers powdered in half a pint of luke-warm water, is taken at a draught, the suspended powder being all swallowed. Lemon juice may be taken before and after the dose. It usually brings away the worm in an hour or two after it has been taken. Those who have tried this remedy state that it is equally safe as effectual; and the only objection to its employment is its high price at present.]—*Dublin Quarterly Journal*, May, 1850.

31. *Treatment of Chorea*.—M. FAIVRE D'ESNANS mentions, in the *Journal de Médecine et de Chirurgie Pratiques*, that he has obtained the happiest results from the prussiate of iron in chorea and epilepsy, and he gives several cases where the cure was obtained in between four and eight days. He uses the following formula:—Prussiate of iron, fifteen grs., extract of valerian, forty-five grains; make twenty-four pills. One pill to be taken three times a-day, at six hours' interval, each pill to be followed by a wineglass of infusion of valerian. The author was induced to try the prussiate of iron, from having seen M. JOURNES use it, at the Military Hospital of Strasburg, for intermittent fever. As he considers that both diseases (chorea and ague) have their seat in the medulla spinalis, he thought that the same remedies would prove efficacious in both complaints, in which supposition, according to his statements, he was not deceived. Dr. Zollickoffer, of Maryland, used it many years since in intermittent and remittent fevers, dysentery, &c., and highly extols its powers. (See *Philad. Journ. Med. and Phys. Sc.*, vol. vi., 1823.)

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32. *Diseases of the Membrana Tympani*.—MR. TOYNBEE exhibited to the pathological society of London (March 18, 1850) an extensive series of preparations illustrative of the diseases of the membrana tympani:—

He remarked that time would not allow him to do more than indicate briefly